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TO CORRESPONDENTS.

C. Hunt.—*If the Great Central Gas Company have dismissed you from your office of Inspector, solely in consequence of their having lost the supply of gas to the Daily News printing-offices, they have committed an act of great injustice. We happen to know that the loss was caused by the repeated remonstrances of the compositors and others engaged in that establishment, at the deficiency in the illuminating power of the gas supplied by that company, and in consequence of which they were unable properly to execute their work.*

J. B. S., Leghorn.—*Ninety-nine out of every hundred engineers and managers of gas works disbelieve the statement that so little as one tenth part of the total quantity of coke produced in a gas work, where Newcastle coal is used, will suffice for the heating of the retorts, unless the retorts themselves are unsound, and a considerable quantity of the gas leaks out, which by its combustion shall diminish the consumption of fuel. A similar statement was made with regard to the Tottenham Gas Works, which were sold at a high price in consequence; but when the purchasers came to work them on their own account, and to rectify the stock accounts of coal and coke, the consumption of fuel turned out to be upwards of 30 per cent. of the coke produced.*

An Original Subscriber *had better communicate with us privately. The time is approaching when his proposal may be made with some prospect of success. At present we consider it premature.*

J. Richards.—*Consult a competent engineer, and pay him his fee.*

NOTICES.

Advertisers and subscribers are requested to take notice that Thomas Smith has ceased to be employed by the proprietor of this Journal from the 1st inst.

The subscription is 10s. per annum if paid in advance, or 12s. on credit, payable in two sums of 6s. each, due in June and December of each year. All subscriptions commence from the 10th of January.

All communications and orders for Advertisements to be addressed to the Editor, 32, Bucklersbury, London.

Back numbers exceeding three months' date will in future be charged double price, unless six or more consecutive numbers are taken at the same time. Nos. 6, 15, 18, and 23, are out of print; and Nos. 24, 25, and 26, can only be had with the entire series, forming volume 2.

The Editor will be particularly obliged by his friends forwarding to him Notices of all Meetings, Trials, or Appeals, which it may be interesting to the Gas World to have reported.

Circular to Gas Companies.

The Editor may be consulted on all subjects connected with the supply and manufacture of gas, or the alteration and improvement of gas apparatus, and the construction of new works.

The audited accounts of the Great Central Gas Consumers' Company for the year ending September 30, 1851, and the unaudited ones for the six additional winter months ending March 31, 1852, were laid before the shareholders of that company at the half-yearly general meeting held on the 30th ult, and will be found in another column. Taking them in connection with the declaration of dividends at the rate of 7½ per cent. per annum for the first period, and of 10 per cent. for the latter, they present the nearest approach to a Hudsonian swindle of anything which has come under our notice since the downfal of the Railway King. An honest railway board would as little think of expunging from their balance-sheet all allowance for depreciation of permanent way or rolling stock, as an upright body of gas directors would suffer a dividend to be declared without making due reserves for wear and tear of meters, mains, and services, depreciation of working plant, bad debts on outstanding accounts, and numerous other of the charges to which all gas companies, except the one in question, admit they are liable. But, when in addition to the omission of all such charges in the accounts now presented, it was patent to the directors that the enforcing of the original contract for the manufacture of gas at 1s. 4½d. per 1000 feet must result in the ruin of the contractor, the declaration of the dividends above mentioned becomes the more inexcusable, and the juggle by which the inevitable explosion has been delayed deserves to be recorded. We are in possession of the details of the negotiation which had nearly terminated in the transfer into other hands of the contract for the manufacture of their gas. We know, also, what threats and influences were brought to bear upon the directors to prevent this, and to force them into a compliance with the modification of the original contract announced at the late meeting, and are, consequently, not surprised at the rumoured resignation of the chairman. The crisis which the affairs of this company is now undergoing ought to have prompted more than usual caution at such a juncture; but we have, instead, the most reckless, unblushing imposition which it has ever fallen to our lot to expose.

Take the year's audited accounts, and they show that £207,000 was employed in the operations of the company on September 30, 1851, viz.:—

Shareholders' capital	£147,966	6	6
Sundry creditors	21,823	1	10
Ditto, ditto, on bills payable	4,802	9	10
Loan on shares	7,500	0	0
Ditto, on mortgage	25,000	0	0
	£207,091	18	2

The difference between the year's receipts and disbursements on revenue account (striking out the charge of £385. 0s. 4d. for interest and discount) is £12,689. 10s. 9d., or only 6 $\frac{1}{100}$ per cent. upon the capital employed; and even this is without any allowance for wear and tear of plant, mains, services, and meters, bad debts, or expenses on the £10,873. 14s. 4d. of outstanding accounts (Tallis's to wit). Yet, in the face of such an account, and the knowledge that it was based upon a ruinous contract for the manufacture of gas, a dividend at the rate of 7½ per cent. per annum is proposed and carried.

From the unaudited accounts for the last six winter months we learn that the capital employed had increased to upwards of £214,000, and that the difference between the six months'

receipts and disbursements (striking out the charge for interest as before) is £10,662. 9s. 6d., or a fraction less than five per cent. on the capital, also without any allowance for the charges previously enumerated. Now, though according to Cocker twice five does make ten, yet we have still to learn that the two summer quarters of any gas work can be equally productive with the two winter quarters; and till that is demonstrated, we say that the declaration of a dividend absorbing the entire profit of six winter months is a deliberate and palpable attempt to bolster up the credit of an unhealthy speculation.

We claim some credit for the accuracy of our predictions as to the practical working of this company. We have uniformly asserted that the expenditure would considerably exceed, and the income fall short of, the estimates. After the last half-yearly general meeting, we pointed out the improbability of Mr. Dakin's estimate of a rental of £53,000 being realised; and he is at length compelled to admit that the six months winter revenue was £10,000 less than he calculated upon. We said at the time that the 5 and the 3 ought to exchange places; and, in reality, the year's revenue is only £33,358. 13s. 5d.

With respect to the quality of the gas now supplied there is no cause for complaint. Mr. Lewis Thompson is carefully testing it daily, and finds it to range from 12 to 12¾ 120-grain sperm candles for the five feet argand burner. He has never yet found it to reach 13 candles, although we are given to understand that visitors to the works at Bow-common are shown a similar burner, with a strongly reflecting surface at the back, which causes it to indicate 17 or 18 candles by the photometer there used. The directors claim for themselves a much greater amount of liberality towards the public than they are really entitled to in respect of the quality of the gas now supplied. They are keeping up the standard of their act of Parliament, and but very slightly exceeding it.

The City of London Gas Company owe it to those friends who have supported them in their late struggle, publicly to express their dissent from the paragraph in their associate's report, in which it is again repeated, and apparently with their sanction, if not at once contradicted, that the quality of the gas supplied by them in the year 1849 was below 9½ candles.

At the late meetings of the Chartered and South Metropolitan Gas Companies, further reductions in their respective dividends were announced: the former from five to four per cent. per annum, with a very unfavourable balance-sheet; and the latter from six to five per cent. The time is evidently approaching when the price of gas in the metropolis must undergo revision, unless the usual course of events in commercial affairs is to be reversed in respect of gas, and those who have expended their capital in its manufacture and supply are willing to continue its sale at unremunerating prices.

We have recently availed ourselves of the invitation given us last month to inspect the new apparatus erected at the London (Vauxhall) Gas Works, the chief object of which is the manufacture of gas and good hard coke, suitable for railway or foundry purposes, at one and the same operation. Twelve out of the sixteen ovens are in action, doing the work of about 70 ordinary 12-inch retorts; and, as the low temperature of the ovens materially increases the quantity of tar produced, a supplementary tar-decomposing apparatus is added, equal to about 30 additional retorts, in which the entire of the tar is converted into gas. The experiment appears to be successful, so far as the manufacture of coke is concerned, the quality of which is such as to return from 75 to 80 per cent. of the first cost of the coal, beyond the fuel consumed; but the outlay, under the most favourable circumstances, appears to be treble or quadruple of that required by the old system, and the surface occupied by the ovens is from 8 to 10 times greater than is necessary for the production of the same quantity of gas with retorts. The equivalent of 100 12-inch retorts, with a new chimney and exhauster of sufficient capacity for 400 retorts, is stated to have cost nearly £20,000; but the expenditure was largely augmented by the treacherous nature of the ground, requiring extraordinary precautions in the foundations. Whether there will be any saving in labour and in wear and tear, time only will decide. We have not yet had an opportunity of testing the quality of the gas; but, when the description of coal to be employed is finally determined on, we shall take an opportunity of doing so. The exhauster is the most perfect machine of the sort in this country. It consists of three large gasholders, working at a very slow speed, with hydraulic valves, and performs its functions with such precision that not the slightest oscillation can be detected on the pressure gauges at the ovens. We shall endeavour to give an engraving of it at an early period.

Communicated Articles.

(The crowded state of our columns compels us to defer the continuation of "The Chemistry of Gas Lighting" till next month.)

GEOLOGICAL SKETCH OF THE NORTH WALES COAL-FIELDS.

Such of our readers as may have had occasion, during the last quarter of a century, to consult the various geological maps of Great Britain issued within that period, will probably recollect to have seen, upon those published twenty years or so ago, an obscure and irregular patch of a very sombre colour, commencing at the mouth of the river Dee, in Flintshire, and running in a south-easterly direction as far back as Wrexham. Now, in maps of this description it is usual to designate the particular formations by peculiar colours, the counterparts of which are, or ought to be, placed on the margin; but, in regard to the patch in question, the tint chosen was formerly such a happy admixture of two or three of these marginal colours, that the investigator was left in an extremely perplexed condition, and could at best form only a vague guess as to the real nature of the mineralogical deposit thus indicated. It might be the upper or lower silurian, or a bed of clay, slate, or lignite, or retinite, or it might be coal. There was a pleasing facility for the exercise of the imagination, which, did it not proclaim the existence of great ignorance in the constructors of the map, we should almost feel inclined to envy, from the increased interest which it must have excited on the part of the geological public. But the rigid hand of improvement has for ever put a stop to the dreamy speculations which then doubtless filled the mind of many a wanderer on the banks of the Dee. The dubious patch is no more; but, in its stead, we now find three distinct and independent coal-fields, raising annually not less than half a million tons of excellent bituminous coals. That which twenty years since was an apocryphal patch is now becoming one of our most important coal districts; and for this vast improvement we are mainly indebted to railway communication. The neighbourhood of Ruabon, in North Wales, had long enjoyed a local reputation for its supply of coal; and it seems probable that one of the superficial beds of this mineral had even been worked by the Romans, who had a camp at Caergwrle. But, as a coal county, it was altogether unknown, and, in fact, still is so to a large majority of our latest writers, most of whom merely hint at its existence.

To fill in this geological hiatus is the task which we have undertaken; and those who are inclined to criticise our humble efforts with severity should remember that to their indolence or carelessness is due the chasm in science which we thus imperfectly attempt to close.

There are, as we before said, three coal beds in the vicinity of Ruabon. The most northerly of these receives its name from an adjoining village called Brymbo, about ten miles to the south of which is the Ruabon field; and lying nearly in the midst of these we find another, termed the Ponkey, or Ruabon Ponkey, coal-field, and situated in Denbighshire.

The coal measures here lie upon millstone grit and mountain limestone; in the latter of which large and valuable deposits of lead and zinc ores are found, consisting chiefly of galena and blende. This blende is in sufficient quantity to have led to the erection of several zinc manufactories near Ruabon. Veins of copper ore also exist in this vicinity; and there are extremely valuable deposits of fire clay and freestone. In fact, no locality in this island would more amply reward a geological inquirer than is here comprised within an area of a few square miles. The adherents of the Plutonic and Neptunian theories may each find food for reflection; for the agency of both fire and water is visibly imprinted upon the various strata. The ironstone of this district is of the argillaceous kind, and affords a remarkably pure iron, which has long held a high reputation for the construction of those parts of machinery intended to resist great force, or for the fabrication of gas retorts and other apparatus destined to endure a high and long-continued application of heat. In a parliamentary report, published a few years since, where the details of a series of practical experiments are given as obtained in the Government Dockyard at Deptford, this peculiarity of the Brymbo iron is specially alluded to, and it is consequently recommended to be employed in Government works.

Returning, however, to the subject of coal, we may state that, though it is but four years since railway communication laid open the mineral treasures of the Ruabon district to the markets of this kingdom, yet, so rapid has been the industrial development of the neighbourhood, as already to have opened out sixteen different seams of coal, all of which are, more or less, fitted for domestic use, for the manufacture of the best kinds of coke, and for the production of coal gas. The remarkable freedom from ash and sulphur which characterises many of these coals renders them of great value for household purposes, and for the manufacture of railway

coke; in both of which respects they are now becoming great favourites. We shall publish, towards the end of these remarks, a complete analysis of the whole of these coals, made not long ago by Mr. L. Thompson, and from which their real value may be gathered at a glance. Meantime we proceed to lay before our readers the following tabular views of the stratification of the earth in the Brymbo and Ruabon coal-fields; merely premising that these are totally separated from each other by a tremendous fault or dislocation, which seems to have been a crack or rent in the transverse axis of the coal seams of many fathoms in width and depth, the vacuity being now filled in by loosely adhering debris and imperfect conglomerate. And it is worthy of remark that no whin dykes, or other evidences of volcanic action, are visible in these faults, as is generally found to be the case in the North of England coal measures.

SECTION OF THE STRATA AT BRYMBO COLLIERY.

	Thickness.			Distances.			Depths.		
	yds.	ft.	in.	yds.	ft.	in.	yds.	ft.	in.
Soil, &c.	5	0	0						
Rock	11	0	0						
Fire clay	2	0	0						
White shale	2	0	0						
Rock	8	0	3						
White shale	1	2	0						
Little top coal	0	2	0						
White shale, from 1 ft. to a yard	0	2	0						
Upper stinking coal	1	0	0						
				32	0	3	32	0	3
Rock in beds, 3 or 4 inches thick	8	0	6						
Fire clay	1	2	6						
				10	0	0	42	0	3
Rock	39	2	0						
Lower stinking coal	0	1	0						
				40	0	0	82	0	3
Rock	1	0	0						
Strong dark shale	5	1	6						
Strong rock binds	3	2	6						
Drowsal coal, 6 ft. 6 in. to 5 ft. 6 in.	2	0	0						
				12	1	0	94	1	3
Strong black stone	8	1	6						
Powel coal	1	1	0						
				9	2	6	104	0	9
Rock and coal mixed	1	0	0						
Strong light shale, dark towards the bottom	14	0	0						
Two yard iron stone: Top measure 3 to 4 in.	0	0	3½						
Two yard iron stone: White shale	0	2	5½						
Two yard iron stone: Bottom measure 6	0	0	3						
				16	0	0	120	0	9
White shale	1	1	6						
Two yard coal	2	0	0						
				3	1	6	123	2	3
Fire clay	0	2	7						
Riband coal mixed with rock	0	2	9						
Crank iron stone in balls, 4 in.; white shale 13 in.	0	1	5						
Crank coal, 2 ft. 4 in. to 3 ft.	0	2	8						
				3	0	5	126	2	8
Fire clay	0	2	4						
Mixed shale, rather dark	7	2	4						
Grey ironstone 4 in.; shale, same as above, 6 in.	0	0	10						
Brassy iron-stone: Top measure 0 0 4									
Brassy iron-stone: White shale 1 0 5½									
Brassy iron-stone: Bottom measure 0 0 2½	1	1	0						
				10	0	6	137	0	2
Soap stone	1	0	6						
Hard black stone	0	1	9						
Brassy coal, 5 ft. 6 in., with a band of cannel	1	2	6						
				3	1	9	140	1	11
Soft white bass or fire clay	0	2	6						
Light shale, with ironstone measures	3	2	0½						
Bed of ironstone	0	0	4						
Strong shale, mixed with ironstone	3	2	0						
Black bed coal, and ironstones: New pin 1½ inch									
Black bed coal, and ironstones: do. 2 inches.									
Black bed coal, and ironstones: Top stone, 4 in.									
Black bed coal, and ironstones: Pin do. 2 do.									
Black bed coal, and ironstones: Shaley do. 3 do.									
Black bed coal, and ironstones: Black stone, 10 do.									
Black bed coal, and ironstones: Coal, 2 feet	2	1	4						
				10	2	2½	151	1	1½
Strong shale, mixed with ironstone	4	1	8						
New white ironstone measures, containing 3 beds, 2, 2½, & 3 in.	2	2	7½						
Black ironstone	0	2	3						
Strong dark stone	4	2	6						
Main coal ironstone, 1 in. to 2 in.	0	0	1½						
Light clod, or soft shale	0	2	4½						
Main coal, 9 ft. 9 in.	3	0	9						
				17	0	3½	168	1	5
Soft light shale	0	1	0						
Hard light shale	6	2	0						
Eight-inch coal	0	0	8						
				7	0	8	175	2	1
Soft white shale, or bass	0	1	0						
Hard rock, rather red with ironstone balls	16	1	4						
Little, or the yard coal, ¾ to ⅘ yd.	1	0	0						
				17	2	4	193	1	5

SECTION OF THE STRATA AT BRYMBO COLLIERY—
(Continued.)

	Thickness.			Distance.			Depths.		
Bass	0	0	2						
Strong rock, rather red; in the middle there are two beds of ironstone, 1 inch each	14	2	1						
Four measures of ironstone: Top measure 2 in. hard									
Four measures of ironstone: 2nd do. 3 do.									
Four measures of ironstone: 3rd do. 3 do.									
Four measures of ironstone: 4th do. 4 do.	1	2	0						
				16	1	3	209	2	8
Hard brown shale	1	0	0						
Do. do. stone, 6 in. to 1 ft. 6 in.	0	1	0						
Two-foot coal	0	2	0						
				2	0	0	211	2	8
Hard light pounson	1	2	2						
Hard yellow rock	4	2	2						
Twelve-inch coal	0	1	0						
				6	2	4	218	2	0
Soft white bass	0	0	6						
Soft white shale	3	2	6						
Dark strong clay	0	1	6						
Four-foot coal	1	1	2						
				5	2	8	224	1	8
Hard rock	5	1	11						
Soft clod	0	0	4						
Two foot 6 inch coal	0	2	6						
				6	1	9	231	0	5

SECTION OF THE STRATA AT RUABON COLLIERY.

	Thickness.			Distance.			Depths.		
	yds.	ft.	in.	yds.	ft.	in.	yds.	ft.	in.
Light rocky shale	7	0	0						
Dirty coal	1	0	0						
Hard dark shale	15	0	0						
Quaker coal	1	1	0						
				24	1	0	24	1	0
Hard shale	13	0	0						
Hard rock	25	0	0						
Main coal bind	0	1	8						
Clunch	0	1	2						
Main coal	0	4	10						
				39	3	8	64	0	8
Holing under coal	0	0	9						
White clunch	1	0	3						
Hard blue shale with rock mixed	11	2	6						
Soft bind	0	1	0						
Brassy or top yard coal	1	1	4						
				14	2	10	79	0	6
Hard dark clunch	2	0	0						
White shale mixed with ironstone	4	0	0						
Crank coal	0	2	2						
				6	2	2	85	2	8
Blue shale	7	1	0						
Hard white rock	2	1	0						
Dark shale	7	1	0						
Red coal	0	1	8						
				17	1	8	103	1	4
Hard white shale	6	0	0						
Hard rock	0	2	0						
Hard shale mixed with rock	4	0	0						
White shale, with three beds of ironstone	1	1	6						
Bed of ironstones	0	0	3						
Black shale	0	0	6						
New coal	0	2	3						
				13	0	6	116	1	10
Fire clay	1	0	0						
New coal bench	0	2	10						
				1	2	10	118	1	8
Fire clay	1	0	10						
Fire-damp coal	1	0	4						
				2	1	2	120	2	10
Fire clay	1	1	10						
Dark shale	17	0	0						
White hard rock	0	2	0						
Dark shale	5	2	0						
Nant coal	1	0	1						
Black clod	0	0	3						
Nant coal bench	0	1	1						
				26	1	3	147	1	1
Light shale	4	0	0						
Dark shale	4	1	6						
Black shale	0	1	6						
Yard coal	1	0	0						
				10	0	0	157	1	1
To wall and bench coal	16	2	0						
To wall and bench coal: wall	0	1	7						
To wall and bench coal: clunch	0	0	11						
To wall and bench coal: bench	0	1	6						
				18	0	0	175	1	1
To half-yard coal	24	1	6						
To half-yard coal: coal	0	1	6						
				25	0	0	200	1	1

In the Brymbo district there is a singular dislocation visible even on the surface, and passing in the direction of the vein. This forms a deep valley, and is no doubt the remains of a chasm which has

penetrated even lower than the coal strata; for, though coal is found at a considerable depth beneath the hilly sides of this valley, and may even be traced by an imaginary levelling line from one side to the other, yet in the valley itself no coal exists at any depth hitherto reached; but, on the contrary, the mass of the valley seems made up of water-worn pebbles, conglomerate limestone deposits, and other debris from the older formations; thus tending to prove that, since the deposition of coal in this neighbourhood, great volcanic changes have taken place, though unaccompanied by any exudations of lava or whin. The surface of the coal, which terminates at this valley, has not yet been reached in a sufficient number of instances, to enable a judgment to be formed of its original condition; but this result will probably be attained ere long, and the interesting question decided, whether or no that termination of the bed of coal exhibits the smooth and rounded traces of the action of water, or the burnt and coke-like sponginess consequent upon the agency of fire.

The following is a copy of Mr. Thompson's analysis of these coals, from which their value for the purposes of the coke-maker and gas-manufacturer may be at once arrived at:—

BRYMBO COALS.

Name of Coal.	Specific Gravity.	Per centage of Volatile Matter.	Per centage of Coke.	Per centage of Ash.	Sulphur in Coal.	Sulphur in Coke.	Per centage of Ash in Coke.	Specific Gravity of Gas.	Cubic feet of Gas per ton.	Condensation per cent. by Bromine.	Illuminating power of 5 feet in 120 grains Sperm Candles.
Drowsal	1·238	37·5	62·5	0·57	0·85	0·45	0·8	·475	10·400	6·1	15·0 candles
Two yard	1·253	30·6	69·4	4·75	2· 4	1· 3	3·4	·452	10·200	5·1	13·0 „
Brassy 4 feet	1·249	42·0	58·0	0·75	1· 1	0·66	1·3	·450	10·600	6·7	15·0 „
Black bed	1·285	37·9	62·1	2·40	1· 3	0·75	3·8	·452	10·400	6·4	15·0 „
Brymbo Main	1·369	40·7	59·3	1·25	1· 1	0· 6	2·1	·540	10·500	6·8	15·0 „
Best yard	1·242	37·7	62·3	3·25	1· 1	0·60	5·2	·440	8·500	6·4	15·0 „
Four feet (with cannel band)	1·280	44·0	56·0	1·80	1· 2	0· 6	3·2	·493	10·400	7·1	16·0 „
Cannel No. 1	1·574	29·6	70·4	33·25	2· 2	1· 0	47·0	·579	4·700	14·0	21·0 „
„ No. 2	1·520	30·9	69·1	31·2	2· 1	1· 0	45·0	·504	6·650	11·5	20·0 „

RUABON COALS.

Main	1·270	40·0	60·0	1·10	0·95	0·50	1·8	·482	10·250	6·5	15·0 „
Top yard	1·262	40·0	60·0	1·75	1·10	0·57	2·9	·471	9·200	6·5	16·0 „
Crank	1·264	38·3	61·7	2·10	1·25	0·65	3·4	·491	7·600	7·2	17·0 „
Nant	1·283	41 2	58 8	0·65	0·87	0·44	1·1	·465	9·800	4·2	13·0 „
Bench	1·272	38·2	61·8	3·75	1·30	0·75	6·0	·457	10·200	5·6	13·5 „
Yard	1·263	36·1	63·9	0·58	0·90	0·48	0·9	·450	9·500	5·5	15·0 „
Wall	1·271	36·2	63·8	0·66	0·85	0·47	1·0	·461	9·000	5·6	14·0 „

Correspondence.

MR. LEWIS THOMPSON ON THE ILLUMINATING POWER OF GAS IN THE METROPOLIS.

Sir,—In venturing monthly to lay before your numerous and practically experienced readers a photometrical diary of the illuminating gases supplied to the City of London, I well know that I lay myself open to the hostility of some, the misconstruction of others, and the suspicions of many. Nevertheless, I am also certain that by a large majority I shall be judged and encouraged according to the accuracy and truthfulness of my observations, as confirmed by time and corroborated by the subsequent experiments of others. If, therefore, I am true to the cause of strict impartiality and justice, I have nothing to fear from the petty malevolence of a few interested individuals, whose animosity must in the end rather benefit my present object than injure it. Under these circumstances, and with an internal conviction of the purity of my own motives, I place the whole matter in the hands of the public, without the slightest apprehension concerning the ultimate verdict which that public will not fail one day to pronounce.

In entering upon an investigation of this kind there are many preliminary difficulties in the way of obtaining uniform and satisfactory results. These difficulties are largely connected with the various mechanical contrivances for measuring and consuming the gas experimented upon; and I have here to acknowledge with gratitude the vast services which have been rendered to me, no less disinterestedly than freely, by the highest and most experienced gas engineers in this kingdom, many of whom during the last month have visited my humble establishment, and left it enriched by their suggestions, or strengthened by their approval. To Mr. Alexander Wright I am specially indebted for his personal superintendence during the construction and arrangement of the photometrical apparatus and fittings; and to Mr. Alfred King, of Liverpool, my thanks are also due for a personal visit and many valuable suggestions, as well as for an extremely delicate "governor," of his own invention and construction.

Those who will honour me by personally inspecting the different combinations by which absolute accuracy is here sought to be gained, will, I have every reason to believe, discover something both new and useful; but of this I am certain, they will not fail to accord me their entire confidence. My invitation is open to all without distinction, and all persons interested in the consumption or manufacture of coal gas are hereby respectfully offered a free and hearty welcome. I make no restrictions—no exceptions whatever. The most ignorant are welcome; the most experienced are welcome—the casual inquirer and the prying critic. In fact, all interested in gas are welcome, from the highest to the lowest—from Mr. Richards, of the Imperial, to Mr. Dakin, of the Great Central.

I will now say a word or two respecting the illuminative standard employed, and upon the subject of condensation by bromine. The former is a spermaceti candle, or rather candles, for three are used, so as to secure an average rate of light and consumption, and bring the photometer card over that portion of the scale where slight alterations in distance do not multiply themselves rapidly. The candles are always counterpoised in a delicate balance before the commencement of such experiment, and the loss of weight ascertained at the end of a given time, and the photometrical indications brought to one uniform rate or consumpt of 120 grains of sperm per hour for each candle. And I may here add that the candles I employ actually consume from 120 to 128 grains per hour. The amount of condensation by bromine is arrived at by filling a graduated tube to the extent of 100 measures with the gas to be examined; a drop of bromine is then introduced, and the whole agitated together until the gas has assumed the peculiar red hue of the vapour of bromine. At the end of five minutes the surplus vapour of bromine is removed by a solution of potash, and the contents of the tube reduced to the same temperature as at the commencement of the experiment, when a water level is made between the outer and inner sides of the tube, and the amount of the absorption read off at once. Equality of temperature is easily attained by immersing the tube and its contents for five minutes, both before and after the application of the bromine, in a tall vessel filled with water. The mode in which the specific gravity of the condensed portion is deduced, depends upon the difference in specific gravity between portions of the gas before and after condensation. The necessary apparatus is, however, rather complex in consequence of the large bulk of gas operated upon at one time, and a description of it would occupy more space than I can fairly claim in the already crowded columns of the Journal of Gas Lighting. A moment's inspection is, however, sufficient to enable any one to comprehend its use and practical application; and it is needless for me to add that I shall be very happy to exhibit the whole, and offer explanations.

The calorific power of the gas is determined very simply by the actual weight of water boiled off during the consumption of each cubic foot. The result is, therefore, a practical one, and applies to each gas when burnt at the rate of 10 cubic feet per hour.

Not having had it in my power to make a sufficiently extensive series of experiments upon the gas supplied by the Chartered Gas Company, I refrain from publishing this month any statement respecting that gas, which will, however, be found in common with the others in all my subsequent observations.

The following tables exhibit the results obtained from the gas of the Great Central Gas Company, and from that of the City Gas Company, between the 9th of April and the 8th of May:—

Illuminating power in 120 grain candles.

	Highest.	Lowest.	General Average.
Great Central Company	12·85	12·	12·5
City Company	13·7	12·2	13·4

Condensation by bromine.

	Highest.	Lowest.	General Average.
Great Central Company*	5·1	4·	4·4
City Company	4·5	4·	4·1

Calorific power in grains of water boiled off, per cubic foot.

* From the comparatively low illuminating power of the Central gas,

	Highest.	Lowest.	General Average.
Great Central Company	2720	2355	2410
City Company	2842	2694	2786

LEWIS THOMPSON.

No. 7A, Pancras-lane, City, May 8, 1852.

THE "MR. KEMP" OF THE "MINING JOURNAL."

SIR,—I have read the report of the Southport Commissioners in your March number, and your comments thereon. I have also read an article in the *Mining Journal* of the 3rd inst., not at all, I think, consistent with legitimate newspaper controversy. Why, the Queen's first sergeant, with a brief from the most knowing of "the Limbs," could not have been more ardent in espousing the cause of his client than this interested writer is in defending the water-gas system. What absolute absurdity! Editors of weekly newspapers meddling with subjects they personally, most probably, know not one iota about, and, under the sanction of their editorial prestige, seeking to absorb the functions of judge and jury, and pronounce a verdict in accordance with—their directions. How does the case stand? You, as editor of a scientific journal, exclusively devoted to gas matters—with all the advantages of your own personal practice, and the constant intercourse with professional men of every standing—consider it justifiable, in the discharge of your duty, to criticise, and, may-be, to condemn, matters and things as they appear before you, and which, at times, may not be congenial to parties interested. Your personal character is assailed through the columns of a contemporary, and supported only by assertions. Are not your columns open to every contributor to discuss the subjects opened in them? And, if the matter will bear discussion, I confess I cannot see why the legitimate ground should be departed from. It certainly is not by plausible newspaper puffs any plan of real merit will succeed. They may catch the inexperienced eye, and succeed in carrying with them a considerable portion of public applause; but will practice bear them out in detail? Having watched, with some interest, the published statements in connection with hydro-carbon, resin, coal, &c., not with a jealous eye, but with an anxious one—believing that, if the many valuable results reported to be obtainable from that process could be carried out in practice, every one engaged in connection with gas works, be he engineer, manager, gas proprietor, or consumer, would feel an equal interest in its success—therefore, in my idea, the *fair* question is not whether White's patent, or any other patent, is the best, but will practice bear out the extraordinary experiments exhibited as resulting from the use of hydro-carbon in conjunction with resin, cannel, and other coals? There are many conflicting circumstances collaterally connected with the working of a gas establishment under any system, besides the bare cost of gas from the retorts, and which nothing but practice, in each particular case, can elucidate. I, therefore, do not think this endeavour to force (on the professional mind it cannot) on popular ignorance a system that has not been satisfactorily matured, speaks for the solidity of the process. So far from it, I consider the Southport report has a contrary tendency; and I doubt whether all the special pleading it is possible to evoke can alter the plain facts as they appear. They suffice to show that, however they, the commissioners, may succeed with the gas from cannel coal in conjunction with hydro-carbon, the use of the latter with resin has resulted, to say the least, in doubt as to its possessing any advantage over the ordinary coal-gas process.

Wexford, April 17, 1852. WAIT A WHILE

[The writer of the above well-intentioned letter has given himself some unnecessary trouble. The article to which he refers was not an editorial one, but one of those which not unfrequently find their way "promiscuously," as the saying is, when no one can tell exactly how, into the columns of a certain class of newspapers; and, had the writer searched the files of the *Mining Journal*, he would have stumbled upon one of a very opposite tendency in the number for November 1, 1851. The "Mr. Kemp" of the present occasion is generally believed to be a certain Mr. James Miller (or Dr. Miller, as he is sometimes called, when it is required to give eclat to a newspaper puff), who is reported to have invested a few thousands more than he can afford conveniently to lose in the working of White's patents; and hence the virulence with which he attacks Mr. Lewis Thompson's able "History of the Manufacture of Water Gas," and another correspondent, who has, to his great annoyance, exposed the repeated failures of his process, and the tricks resorted to, to prevent the truth becoming public. Unlike the class of journalists to which we have before alluded, we have voluntarily, and without the solicitation of any one, inserted in our columns every authentic document on the hydro-carbon gas controversy which has fallen into our hands, irrespective of the source from which it issued; and the chief complaint against us is, that we have not suppressed whatever militated against the interests of parties who could not afford to be honest, and in this respect to imitate our example. We did for them what no other journal has done, in publishing Dr. Frankland's two reports *in extenso*; and, notwithstanding the scurrilous abuse vomited at us through venal and subservient organs, we shall not alter our practice of giving to the advocates of all sides of a disputed question a fair field for the discussion of their respective views. The letter inserted below from Mr. Gilbert Sanders, the experienced engineer of the United General and Hibernian Gas Companies, imparts a new feature to the controversy, as he proves incontestibly that White has servilely copied a patent which *expired* in 1848, a few months subsequent to the date of White's first patent, and long previous to his second. Mr. Sanders's experience powerfully confirms Mr. Lewis Thompson's views as to the prejudicial effect of *steam* or *vapour* on the nascent gases resulting from the decomposition of carbonaceous substances; and Dr. Frankland's theory of their usefulness, in rapidly sweeping out the illuminating gases, is practically demonstrated to be illusory. Mr. Sanders must make up his mind to brave the furious denunciations of the Frankland-Millerites for his temerity.]

as compared with its high rate of absorption, I infer that much more cannel coal is employed in its production than in that of the City gas; and this is borne out, also, by the different appearance of the gases when burning: the Central seems white and thin; the City, yellow and rich; the former gives intensity of light; the latter, quantity also.

A SUPPLEMENTARY CHAPTER TO THE "HISTORY OF THE MANUFACTURE OF WATER GAS."

SIR,—During the controversy carried on in the JOURNAL OF GAS LIGHTING relative to "White's Hydro-carbon Gas," I hesitated to put forward my claim to priority as a patentee; for, though I long since gave up the hope of successfully manufacturing gas from water in competition with coal, I was yet unwilling to embarrass the labours of the speculators in the same direction by any discouraging remarks from one who had much experience in water-gas manufacture, and who encountered great difficulties and disappointments in endeavouring to develop from it a speculation practicable in a commercial point of view. Now, however, when I find you giving your readers a "History of the Manufacture of Water Gas," I claim for myself a place among the *earliest* patentees.

My patent was taken out for Ireland (only) on the 1st of December, 1834, and the specification was duly enrolled on the 30th of March, 1835. I send you a copy of it herewith, that you may form your own judgment what right I have to priority over Val Marino, in employing water gas freed from aqueous vapour previous to its introduction into the carbonizing retorts; and over White and others in the main principle of their patents, as well as for the use of the retort with partitions.

The following abstract of my specification will support my claim. I shall be content to leave the verdict with yourself and your readers:—

"My invention consists in improvements in the process of manufacturing gas from water, by converting all or the greater part of the carbonic acid, which is given off along with the other gases into carbonic oxide, and rendering all these inflammable gases fit for the purpose of illumination, by causing them to dissolve or take up and carry off the vapours of certain highly volatile and inflammable compounds of hydrogen and carbon in the manner hereinafter set forth; and I do declare that this purpose may be effected by and in the manner following, that is to say:—

"Cylinders or retorts of clay or iron are to be filled, or partially filled, with the finely divided charcoal of wood, of peat or turf, or the coke of pit coal. These cylinders or retorts are to be set and heated in furnaces after the manner of those employed in the manufacture of coal or oil gas. When these retorts are at a bright red heat, water, or the steam of water, is to be admitted at or near one end of the retort, where, coming into contact with the heated charcoal, it is wholly or in part decomposed, and passes out of the retort at or near the other end. By this means a portion of the water will become decomposed, and there will be produced hydrogen, sub-carburetted hydrogen, carbonic acid, and carbonic oxide gases, of which, three, viz., hydrogen, sub-carburetted hydrogen, and carbonic oxide gases, are inflammable, and carbonic acid gas is not inflammable; but to render this last gas inflammable, and likewise to decompose that portion of the water which has come off undecomposed, I cause the whole of the gases and the aqueous vapours to pass through a second retort immediately after leaving the first. The vapour and gases now pass out at the other end of this second retort, and may be made to pass through a third, and so on until the whole, or nearly the whole, of the water is converted, by means of the heated charcoal, into inflammable gases. The apparatus I use for this purpose is a series of two or more retorts, connected by means of tubes in such a manner that the gases and vapour pass through one retort, then enter a second at one end and exit at the other end, and so through a third and a fourth, if thought necessary, which will much depend on the heat and the quantity of water or steam of water passed through, and which ought to be no more than the apparatus is capable of completely decomposing; and I recommend that the retorts be kept at a high temperature and well charged with charcoal; or, instead of the apparatus above recommended, I use a retort having one or more longitudinal divisions, so arranged that, after the gases and vapours have traversed the retort by one of its compartments, they may return through another; my object in both these cases being to pass the gases and vapour over a large surface of the heated charcoal, as thereby the carbonic acid which is formed during the decomposition of the water is, by being combined with more carbon, resolved into double its volume of carbonic oxide, and becomes inflammable. As it is not possible to produce these inflammable gases at all times free from contamination with carbonic acid, I pass them through moistened lime, or the cream of lime, in purifiers such as are used to purify coal gas. But the gases so produced have little or no illuminating power, and are not yet fit for the purposes of illumination. To render them illuminative, I pass the hydrogen,

sub-carburetted hydrogen, and carbonic oxide gases, through one or more cylinders, or other vessel or vessels, heated to redness, into which I introduce tar (coal tar), turpentine, rosin, oil of rosin, petroleum, asphaltum, bitumen (obtained naturally or artificially), naphtha, vegetable oils, animal oils, tallow or caoutchouc, or the volatile oils produced by the destructive distillation of any of the above-named substances. These substances or any of them, or their volatile oils or any of them, are to be introduced gradually into the heated vessels or cylinders, in proportion to the gas passed through; which gas, combining with the vapours of certain highly volatile compounds of hydrogen and carbon then liberated, will take up and carry off the most volatile part of the same, and become highly illuminative; but as there will also be given off from the above-named substances certain other compounds of hydrogen and carbon, which if carried into the mains and services would be deposited therein and obstruct the passage of the gas, I pass the gas so rendered illuminating through a condenser, such as is employed for coal gas, to condense and arrest the same. The before-mentioned gases may also be rendered illuminating by passing them through a closed box or other vessel containing the volatile oil obtained by the destructive distillation of caoutchouc, coal tar, rosin, petroleum, bitumen, asphaltum, tallow, animal oils or vegetable oils, or naphtha, and to which vessel must be applied a steam or other heat sufficient to convert the most volatile parts into vapour. The gases will in this, as in the first case, unite with the most volatile compounds of hydrogen and carbon, so liberated and become illuminating. It is necessary to pass the gases and oily vapours through the condenser before mentioned, to arrest and condense such parts of them as would condense in and stop the mains and services. But the method which I prefer is to procure, by distillation and careful rectification, the most volatile part of coal tar, of the volatile oil of oil or rosin-gas manufactories, of the volatile oil of caoutchouc, of the volatile oil obtained by the destructive distillation of certain animal, vegetable, and mineral substances, which produce an oil by distillation and rectification, and which will boil under the temperature of 230° of Fahrenheit's thermometer. To obtain this most volatile part, I distil the rectified oils in a water-bath. The addition of a small quantity of nitric acid of commerce, diluted with three or four times its bulk of water, greatly facilitates the distillation. If the acid be used, I wash the distilled oil with an alkali, to separate any acid that might come over or be found during the process. This oil or naphtha I enclose in a covered vessel or box, into which the gas is introduced by means of a tube, for the better combination of the gases with the vapours of these highly volatile compounds of hydrogen and carbon.—(Here follows a description of the apparatus employed for this operation.)

"I also declare that the above process or processes will also be applicable to imparting an illuminating power to the before-mentioned gases, viz., hydrogen, sub-carburetted hydrogen, and carbonic oxide gases, whether they be obtained by other and well-known processes not here described.

"Although I have described the whole of the above process, and the apparatus by which it is effected, I do not claim an exclusive right to any part thereof except the construction and arrangement by which the gases are made to pass over an extensive surface of charcoal or coke, and the arrangement by which the non-illuminating gases, viz., hydrogen, sub-carburetted hydrogen, and carbonic oxide, are combined with the highly volatile compounds of hydrogen and carbon, and thereby rendered illuminating."

The enrolled specification can be seen at the Rolls' Office in this City.

Having now placed my patent fairly before the world as an *historical fact*, a short description of my own experience may not be considered out of place here.

My first acquaintance with water gas was in the year 1830, at the works of the late Dublin Oil Gas Company, for whom I was then engineer. I manufactured a quantity of it at that time for Mr. Donovan's experiments in rendering this gas luminous. I saw many practical objections to Mr. Donovan's process; but it occurred to me that as the residual oil of our rosin gas, for which we could find no market, contained carbon in excess, I might possibly cause a mutual decomposition of steam and the oil by passing them together over heated surfaces of iron, brick or coke. My reasoning was to this effect:—If I can remove a portion of the carbon, the remainder of the oil will become carburetted hydrogen, and assume the form of gas. For this purpose, what so suitable as water?—the oxygen of which will seize the carbon, and its own hydrogen also take up an equivalent of carbon, and thus increase the product. But my expectations were not realized.

The apparatus I employed was a series of six retorts, 9 feet long, 8 inches diameter, open at both ends, and set vertically. About 5 feet of each retort was made hot; the rest was in the brickwork, or protruded a little through, above and below. These retorts were connected alternately at top and bottom by short pieces of 1½-inch welded tube, so that the vapours passed down the first retort, up the second, and so on. Gratings were placed about 2 feet from the bottom in each retort to support the charge, which only filled the heated parts. In the first retort was broken iron, in the second brick, and in the others generally coke; but I tried every other material I could think of as suitable for my purpose.

Water, in a fine stream, flowed into the first retort, where it became steam; that which was not steam passed out by a syphon at the bottom. The steam generated in the first retort became highly heated whilst ascending the second, and encountered the hydro-carbon in its descent through the third—passing through the whole series, or part only, as I determined.

Whilst using the *rosin*, *residual oil*, or *coal tar*, I never produced a fair sample of gas in quantities sufficient to pay for the working expenses, setting no value on the materials. I could only get good gas in quantity when I made use of rosin, Hurry's patent oil, fish oils, or tallow; in fact, substances which yielded good gas in large quantity *without* the water.

When I employed the volatile resin oil, my retorts speedily became choked up with a gritty kind of lampblack; and the connections of the retorts, the mains, and consumers' fittings were loaded with naphthaline—so much so that I was obliged to cease using these cheap hydro-carbons, and rosin was then becoming a very expensive article. I attributed the formation of such large quantities of naphthaline to the presence of water. Reflecting that a high temperature causes the decomposition of carbon in the heavy hydro-carbons, rather than promotes their union, I came to the conclusion that little mutual decomposition took place with the water gas. I then sought to merely naphthalize the purified gas by passing it, along with the vapours of the crude hydro-carbons, through retorts heated to dull redness; but having still to contend with my old enemy, naphthaline, I turned my attention to the production of highly volatile hydro-carbons from residual oil and from coal tar, and applied the gas as described in my specification. In these last two processes I relied on the solvent power of the hydrogen and the carbonic oxide, to take up and carry off sufficient hydro-carbon for the purposes of illumination.

The production of the very volatile hydro-carbons I obtained led to the adoption of the method last described in my specification; and they very nearly led, also, to my own destruction, on more than one occasion, by the explosion of the materials I was working on.

Circumstances obliged me to enrol my specification very hastily, to preserve my own rights; but I never offered it to the public, having had no confidence in the practical application of any of my processes, especially after having had some more experience of the wear and tear, the general cost, and the trouble and uncertainty of the manufacture.

The opinion I formed in 1835, of the real value of water gas, I still entertain, which is its solvent property in taking up the vapours of naphtha usually deposited in the tar and residual liquors of gas manufacture generally. I am sceptical of any real double decomposition taking place either with oil, rosin, or coal gas vapours, which would be worth working for. I believe that certain rich gases, such as those from oil, rosin, or cannel, may be mixed with small portions of water gas to the improvement of these gases, as the hydrogen will promote the more perfect combustion of the carbon, and obviate the fuliginous property of rich gases; but, to be honest to the consumer, it must be done with caution. The water gas might be generated in retorts such as I have described, or over the nearly spent charges of coal gas, and allowed to pass into the side of the ascension pipe of such retorts as are at the time giving off much rich gas and abundance of volatile hydro-carbons; or the water gas might be added to the gasholder with or without being passed through heated tar. These opinions I offer suggestively; they are my own opinions, but I do not wish to put them dogmatically. I am open to conviction by fair experiment; and, though I failed myself, I will not look grudgingly on the success of others when proved.

In reference to the manufacture of gas from rosin, I had more experience in it, and made more rosin gas, than any other person in the United Kingdom. I was engaged in it with the late Mr. Daniell, and continued to manage the largest rosin works in the kingdom till every other had resorted to coal. Rosin gas can never prosper in this country in an extensive way, either in combination with water gas or otherwise, the material being of uncertain supply in large quantities. It may do for small factories where coal is expensive; but, if its use became at all general, the price would soon mount up, as it did in my time from 4s. 2d. per cwt. to 12s. 9d. Though I vastly improved on Daniell's process, the utmost I could get from one cwt. of rosin was 1200 cubic feet, which, at the minimum quotation above for rosin, would be an expensive gas.

GILBERT SANDERS.

Hibernian Gas-office, Dublin, April 30, 1852.

GAS-MAKING IN THE LOTHIANS.

SIR,—In looking over the returns of our winter quarter ending the 15th of February last, it has occurred to me that some of the results brought out by it may be interesting to the managers of small gas works, who, like myself, are readers of the JOURNAL OF GAS LIGHTING, more especially as the articles in the Journal relate almost exclusively to large works.

The town in which I reside is a small one, of less than 4000 inhabitants, and situated in a purely agricultural district; so that our consumpt is almost confined to shops and private houses, and has never exceeded 1,760,000 cubic feet per annum; of that quan-

tity 860,000 feet has been registered on the consumers' meters in the three months from the 15th of November, 1851, to the 15th of February, 1852; and this from only two retorts of fire clay, each measuring 5 feet 6 inches long, 20 inches wide, and 13 inches high inside.

You will remark that the product of one retort is 430,000 cubic feet in three months—a quantity very much beyond what we have been accustomed to look for as the product of any single retort, even though much larger in cubical contents than that which I have named, more especially as we have never required to work them to their full extent.

I may, however, state to you, that we work in winter with a strong white heat, consume all our own tar, and even use a considerable quantity of furnace coal, the expense of which, I consider, is more than made up from the large quantity of gas which we are enabled to sell per ton of coal carbonized, and which last year amounted to 8561 cubic feet per ton.

Almost the whole of the gas coal we use is first-class Mid Lothian Parrot, from Arniston Colliery, and is laid into the works this year at about 18s. per ton. The gas produced is of first rate quality, which we sell at 9½d. per 100, or 7s. 11d. per 1000 feet, without any discount; as, with the exception of the town lamps, none of our consumers burn more than 20,000 feet in the winter quarter.

We had 341 accounts last quarter; and 860,000 at 7s. 11d. is equal to £340, which gives about 20s. as the winter-quarter average of each consumer. On the other hand, I find that 90, or upwards of ¼th of these accounts, range from 9½d. up to 7s. 1½d., or from 100 feet up to 900 feet; and this will show you either that the quality of our gas must be very good, or that the inhabitants are very economical in the use of it. J. R.

——, *N. B., April* 1, 1852.

NEWBURY GAS COMPANY.

SIR,—Being a shareholder of the Newbury Gas Company, I feel interested in matters relating to gas; and, as in your last number you published a statement of the receipts and expenditure for the past year of a neighbouring town (Odiham), I am induced to send you for insertion the accompanying abstract made from the balance sheets of the Newbury Gas Company since its formation. It perhaps may be well to premise, that the capital of the company was fixed at £5000, which amount was raised in shares of £25 each; and that the whole was expended in the formation of the company, in the lease and costs of works, and some additional expenses and apparatus.

Newbury, April 2, 1852. AN OBSERVER.

RECEIPTS.

Dr.	1848. £ s. d.	1849. £ s. d.	1850. £ s. d.	1851. £ s. d.	Total. £ s. d.
Cash received for the use of gas	800 9 0	1082 6 0	1239 0 4	1269 5 7	4391 0 11
Cash received for the use of meters	10 0 0	15 17 0	21 6 4	26 9 6	73 12 10
Cash received for the sale of coke, refuse, &c.	52 12 10	90 10 0	116 18 6	166 17 4	426 18 8
Cash received for gas fittings and labour ..	201 0 5	137 18 0	94 11 2	99 11 6	533 1 1
Dec. 26, 1851. Bills owing for gas, hire of meters, and refuse ..		.. ..	.. ..	.. ..	699 5 6
By value of stock of fittings, meters, coals, coke, &c. ..		.. ..	.. ..	.. ..	558 6 2
By loans		.. ..	.. ..	.. ..	798 10 7
					£7480 15 6

DISBURSEMENTS.

Cr.	£ s. d.	Total. £ s. d.
Cash paid for coals		1188 11 6
Cash paid for wages and salaries ..		1394 6 3
Cash paid for pipes, retorts, fittings, and meters		1185 15 10
Cash paid for lime		66 7 6
Cash paid for rent, taxes, and insurance		595 4 5
Cash paid for wear and tear, carriage of materials, petty expenses, stationery, printing, and repairs to works ..		622 9 4
Bad debts, interest on loans		62 0 11
Repayment of loans		298 10 7
Cash paid on account of dividends, 5 per cent. on amount of capital, £5000, 1848, minus income tax; 1849, 1850, 1851, in full	799 4 2	
Cash for dividends uncalled for, provided	193 10 0	
		992 14 2
Bills owing for coals, fittings, salaries, rent, and moneys on loan		837 5 6
Balance in favour of company, Christmas, 1851		237 9 9
		£7480 15 9

THE BUNSEN PHOTOMETER.

SIR,—Having been lately called upon, in conjunction with Professor Preisser, of the Municipal College of Rouen, to conduct some experiments at Barentin upon the relative value of coal gas, as compared with what is called boraxo-resin gas, and of oil consumed in a carcel lamp, I made use of the Bunsen photometer, with which the professor was much pleased, and expressed his anxiety to procure one of them. A few days subsequently it was announced to the college that a new photometer had been invented by M. Burel, the engineer to the corporation of that city, and for which he was about to be made a member of the Academy. Upon this instrument being produced, the professor immediately recognised in it a copy of the one used at Barentin, except that the screen and the candle were maintained under all circumstances, at the same distance apart, and were moved together. The professor will not admit of the latter being any improvement, and thinks it possible it may have been tried and discarded in England. Should it be so, some of your correspondents may be able to set the matter at rest. M. Burel was residing in London for some time during the Great Exhibition of last year, so that we are not at any loss to know how he became acquainted with the subject. J. THOMAS.

Havre, April 29, 1852.

[If every one had his due, our worthy friend Church, of the City of London Gas Works, ought to be new academician of the Norman college; for we believe he first adopted the modification of the Bunsen photometer pirated by M. Burel, and he continues its use to the present day. Photometers on this system are manufactured by Messrs. Hulett and Co., *55*, High Holborn.]

THE RIVAL GAS WORKS AT NEWPORT.

SIR,—In the very able critique given in the leading article of your last Journal on the above subject, you have not spared the proprietors of the old Gas Company, but have put them on their defence. They feel, nevertheless, that you have rendered great service to gas companies, to consumers, and to the public in general.

Your practical examination of the new works, in their construction and the quality of gas produced there, as compared with that of the old, proving the former to be 9 per cent. below the latter in illuminating power;—the large outlay to be expended in their completion; the exposure of their pretended and patent superiority to other works—with the reckless and unprofitable bargain made for 21 years to light the public lamps—will all prove to be most salutary cautions to the public not to embark their money in any "National and Provincial Gas Company" resting on such a basis; to the consumers, not again to pay 1s. per 1000 feet dearer for an inferior gas; and to all other local gas companies, to prepare and defend themselves against any such attack as that made upon the Newport Company.

Permit me now to say a few words in explanation and in defence of the old company, as, from your rapid visit here, your information was not quite correctly obtained.

1. The fatal determination, as you describe it, to advertise for tenders to supply gas at the works, was not a new plan with this company; it was adopted in 1835, 1842, 1849, and 1851; the three first upon a per centage to be paid on the rentals charged; and the last at per 1000 feet, as registered by the station meter, which must now be admitted to be an injudicious mode.

2. The prices charged to private consumers, for time burners, was reduced 20 per cent. from the old scale many years ago. In June, 1850, for the first time the consumers, by a memorial to the company, signed by four-fifths of their number, required the gas to be supplied by meter, for three years, as follows:—The first, to 1851, at 8s.; the second, to 1852, at 7s.; the third, to 1853, at 6s.: which terms were agreed to by the company, and both parties were satisfied; thus proving that the introduction of a second company and works was not required or brought in by the consumers.

3. In 1851, as you state, the offer made to the Town Council to light 140 lamps at £2 each for the whole year, including every expense of lamps, pillars, &c., was too tempting to our poor corporation to be refused, considering that, out of their limited funds, they could only afford to light 80 lamps, although charged to them at the moderate price of £3. 5s. each, and below the average charge of all the towns in the county. To meet this opposition the old company offered to go down to £2. 10s. per lamp; but this availed not. The Town Council could not afford to be generous. Their town-hall, tolls, &c., were all mortgaged for £3000. Their lighting and paving rate was limited to 9d. on the pound by act of Parliament. Whether the old company was ruined or not, was no consideration. Their supply of public lamps from 1821 to 1842, at a loss of £3000 to £4000 (the price having been only £1. 5s. each for eight months), must not be taken into account, but forgotten. Thus both parties stood firm, and the third was admitted to take up this great prize—public lamps at £2 per year, and private consumers at 6s.

4. The old company, in January, 1852, reduced their price to 5s., and, as you state, had lost, through corporation and other unjustifiable influences, one-third of their consumers, but not half their rentals from that source; although the amount of public lamps lost, and reduction of price from 7s. to 5s., will amount to more than a moiety of their rentals in 1850.

Of these statements your readers and the public will judge and decide. It remains now to be seen whether the patriotism and justice of the inhabitants of Newport will support the old company

or the new works of the French engineer. At any rate they will show their wisdom, now they have competition, to keep both works up, in order to keep the price of gas down.

A Shareholder and Consumer.

Newport, I. W., May 1, 1852.

Register of New Patents.

Timothy Kenrick, of Edgbaston, Warwick, ironfounder, "*for improvements in the manufacture of wrought-iron tubes.*" Patent dated Sept. 4, 1851.

These improvements consist in enamelling and glazing the interior surfaces of wrought-iron tubes.

For this purpose the patentee employs two compositions—one to form the body, and the other the glazed surface. The body glaze is composed of 100 lb. calcined flints, reduced to a fine powder; 75 lb. borax, also in powder. These ingredients are fused into a mass, and, when cold, ground in water, dried, and mixed with potter's clay in the proportion of 40 lb. of the composition to 5 lb. clay, and sufficient water to produce a paste of a creamy consistence. The glaze is to be poured into the tube, and the tube turned round so as to expose every part of its surface to be covered by the pasty mass. The second glaze is then applied, in a state of powder, over the whole interior surface, and the tube is then heated in a muffle until the glazes are melted. Should the whole of the interior, however, not have been properly covered with the surface glaze, it will be necessary to apply a further quantity of it, and to reheat the tube sufficiently to vitrify the additional quantity so applied. The surface glaze is composed of 100 lb. Cornish stone, 117 lb. borax, 35 lb. soda ash, 35 lb. saltpetre, 35 lb. sifted slack lime, 13 lb. white sand, and 50 lb. white glass in powder. These several ingredients are calcined together, ground in water, and dried. To 45 lb. of the mixture, in powder, is then added 1 lb. of soda ash, and they are mixed together in hot water, and, when dried, produce a powder which is used as above directed.

The patentee observes, in conclusion, that the surfaces of cast-iron tubes have heretofore been enamelled and glazed; and that, therefore, he claims the enamelling and glazing, in the manner described, the interior surfaces of wrought-iron tubes only.

William Boggett, of St. Martin's-lane, gentleman, and George Holworthy Palmer, of Westbourne-park Villas, Paddington, civil engineer, for "*improvements in obtaining light and heat.*" Patent dated Oct. 22, 1851.

Claims.—1. Several arrangements for heating apartments by the burning of gas, or gas and air, in combination with solid luminous and incombustible bodies, such as asbestos, respectively described.

2. The heating of apartments without deterioration of the atmosphere thereof, by the burning of uncarbonized hydrogen gas in open gas fireplaces, as described.

3. The constructing of gas burners for lighting and heating purposes, of certain peculiar forms described, or any of them.

4. The placing and adapting of prismatic lenses, to increase the effect of gas and other lights in a peculiar manner described.

5. Certain improvements in gas cooking apparatuses, and more especially various arrangements therein embodied, whereby the heat is directed in a downward direction upon the substances which are in the course of being cooked or heated.

6. The use for heating purposes of gas burners, having lateral slits or openings between plates of cast iron or other suitable material in place of round holes for the emission of the gas, when there is more than one such slit in the burner, or when more than two such burners or parts of such burners are combined together.

7. The combination of absorbents of heat with gas burner in a peculiar manner represented and described.

8. The construction of gas stoves with angular reflectors in a peculiar manner exemplified and described.

9. The combination of open gas fireplaces with woven wire guards as described.

10. The use of gas burners of cast iron, having slits cut therein for the emission of gas as described.

11. The heating of spatulas by gas, and the same method of using gas for heating laundresses' irons and other similar irons.

12. An apparatus for warming and conveying air to conservatories, &c.

13. An improved blowpipe.

14. An apparatus for heating soldering irons.

15. A method of constructing ovens.

16. Several arrangements of apparatus for heating fluids.

17. A gas gridiron.

18. Certain gas stoves represented and described.

19. The application of gas heat in a downward direction, by means of parallel tubes placed near to each other, and perforated at the bottom or sides, as exemplified and described.

20. The use of soapstone in the construction of stoves, burners, and other gas apparatus.

21. The employment, in the application of the carbonic oxide of furnaces to heating purposes, of different economical methods or processes specified.

Donald Henderson, of Glasgow, "*for an improved apparatus for generating gas, which apparatus may be used for heating and other similar purposes; and other apparatus for heating and ventilating.*" Patent dated Oct. 23, 1851.

This invention consists, firstly, in improvements in apparatus for generating carburetted hydrogen gas; the object in view being to enable persons to make this gas for cooking, heating, or lighting purposes in their own dwellings. By means of this apparatus, carburetted hydrogen gas may be produced in kitchens, workshops, and such-like places, without the inconvenience or unpleasantness ordinarily attendant on that process. The improvements, moreover, are stated to conduce to the production of a greater amount of gas from a given quantity of coal, and in some particulars are applicable to the manufacture of carburetted hydrogen gas on a larger scale.

The gas-making apparatus forms also a novel kitchen range. It is not intended that this range should be built into the space in the wall of the kitchen in the manner of an ordinary range; for, being complete in itself, it may be placed against the wall in front of the chimney opening. The fire grate is arranged so that the fire may be quite enclosed, having a pair of doors which close the front. The oven, which, with the exception of peculiar arrangements for regulating the heat, is of the ordinary construction; there is a hot closet for plates or other requisites, and an ash pit.

The retort for the manufacture of carburetted hydrogen gas is situated immediately above the fire, the space above the retort being confined by a metal plate, so that the heat arising from the fire is concentrated about the retort for the distillation of its contents. This plate extends over the whole area of the range, and forms the surface on which the different culinary operations are performed; its heat is graduated from the one end to the other, giving thereby unusual facilities for cooking. The products of combustion from the fire pass over the bridge, and thence by a passage directly under the before-mentioned plate, or by a channel down under the oven. In order to regulate the course of these products, a valve is placed in the channel, which may be turned on its axis by a handle, so as to open or close that passage at pleasure. When this valve is open, the heat and smoke take that course, as being the more direct to the chimney; but when close, such products are compelled to pass by the channel before mentioned, thereby giving a more extended heating surface to the oven, or, by regulating the valve, a part of the heat may be directed along the top of the oven. From the channels the smoke passes up through the end frame of the range, in the back part of which there is an opening near the top into a channel or flue leading into the chimney. A lining of fire bricks or tiles is used to protect those parts of the range subject to great heat, to prevent loss by radiation, also to protect the metal; the lining of the oven also equalizes and prevents the transmission of any undue heat to the interior; the boiler is at the back, and extends the whole length of the range.

The retort is introduced through an opening in the end of the range, and secured by a flange bolted thereto; it is placed in a position inclining downwards towards the back end, so that any liquid products contained therein may fall to that point where there is the greatest heat. The retort is charged with coal in the ordinary manner; and, in order to facilitate the charging, the door is so fitted to the mouth of the retort that it may be readily moveable in the manner described in the specification. The retort having been charged and the door closed, the retort is subjected to the heat of the fire, and the process of distillation proceeds in the following manner:—The volatilized matters pass from the retort by a pipe, up which they are conducted to the hydraulic main, placed on the top of the range; this pipe dips into the liquid contents of the hydraulic main, and is ordinarily known as the dip pipe. From the opposite end of the hydraulic main, the carburetted hydrogen gas passes off by a pipe which conveys it thence to the condensers and other apparatus, by which the gas is subsequently treated by the processes ordinarily used. It may, however, be observed that the gas pipe should incline upwards from the hydraulic main, so that any products of condensation may return thereto. The products of condensation deposited in the hydraulic main, consisting of tar and other liquid matter, are returned to the retort to be again decomposed, such liquid being either converted into gas, or into a solid residuum in the retort. The return of these first liquid products to the retort is spontaneously effected by means of what I denominate a hydraulic valve, consisting of a vessel in which is placed an inverted cup, supported in position by three stays. A pipe carries off any liquid rising above it in the hydraulic main, and conducts into the outer vessel, from which its only escape is by another pipe carried up within the inverted cup to such a height that the liquid contained in the vessel will have a sufficient column to prevent the passage of gas from the retort in that direction. As the liquid overflows and descends by gravitation, successive quantities of the liquid product are passed so long as the charge continues to produce and add such liquids to the contents of the hydraulic main.

In commencing operation with this apparatus, it is necessary to fill the hydraulic valve to such a height as will prevent the passage of gas to the hydraulic main. To avoid inconvenience from smoke in drawing the charge, a hood or cover is fixed to the end of the range, which is sufficiently capacious to receive the whole volume that may be emitted from the mouth of the retort when it is opened. This hood has an opening into the end of the range, which forms a passage communicating with the chimney. By this means the draught of the chimney carries off the smoke or noxious vapour emitted. In addition to the front fire doors, another fire door is provided, by which the fuel is introduced at the end of the range, as also an ash-pit door having a ventilator, by which the draught is regulated at pleasure.

The specification next describes a drying stove in combination with the apparatus for the manufacture of gas. In this instance two retorts are shown, one of which may be in operation while the other is being charged. In order that the increase of the liquid product may be supplied and confined to the retort in operation, a partition is formed in the hydraulic main, dividing its lower part, by which the accumulation of the liquid from the contents of the retort in action is conveyed back to the same, while the gases evolved pass off by a passage common to both. Each of the retorts is furnished with duplicate parts requisite for the manufacture of gas, as before described with reference to the kitchen range. The drying stove placed above the retort, and separated by the plate before described, under which the flues are conducted as before. In this manner the apparatus may be arranged and conjoined with any heating apparatus where fire heat is required. Where two or more retorts are employed, instead of transmitting the liquid product at once to the retort in which the coal is contained, the patentee sometimes has such retorts in communication, by which the

liquid product is admitted and passed through one or two retorts before it can arrive at that containing the coal, by which time it will be much reduced in quantity. Instead of separate retorts, one retort may be furnished with divisions separating the coal from the liquid product, the different spaces thus divided off having suitable communication with each other at the upper part of the retort.

Another of the improvements in combination with the gas range is a "safety valve," by which the pressure of gas is regulated, and the use of a gasholder may be dispensed with in case where such appliance cannot readily be provided. This valve counteracts the unsteady emission of the gas which takes place when no gasholder is used, and also serves as a protection against any undue pressure. It also regulates the pressure of gas by suffering the free escape thereof into the atmosphere when such pressure rises above a certain determinate amount.

The remainder of specification relates to a bath heated by gas, and a ventilator in which gas is burned for the rarefaction of the air therein, for the purpose of drawing off the vitiated air from the building in which it is used. In the gas-bath heating apparatus, the burners are placed in the interior of a small cylindrical boiler or water-space, at one end of the bath, communicating by pipes, above and below, with the bath. The heated water ascends into the upper part of the bath, and its place is constantly supplied by fresh water from the lower part. The sides of the bath are formed double, and the products of combustion are caused to traverse the flue thus formed, and thereby act, in conjunction with the burners, to facilitate the heating of the water. The gas ventilating apparatus consists of a cylindrical double casing with perforated sides, between which the burners are placed. The hollow in the centre of the casing is in communication with the room to be ventilated at its lower part, and with the external air at its upper. The combustion of the gas produces a rarefaction of the air, by which the vitiated portions are drawn off, and the ventilation effected.

The claims are:—

First. The apparatus used in conjunction with a kitchen range, or with a drying or heating stove, for the generation of carburetted hydrogen gas, wherein the condensed or first liquid products in the manufacture of gas are returned to the retort or retorts for further distillation, whereby a greater amount of gas is obtained, and the whole of the liquid decomposed as hereinbefore described.

Secondly. I claim the hydraulic valve hereinbefore described, applied to the channel through which the liquid product is returned to the retort, in order to prevent the escape of gas by that passage, while at the same time the liquid has free access thereby to the retort by gravitation.

Thirdly. I claim the arrangement of the hydraulic main condenser and pipes connected therewith, in such positions as will permit the liquid product to return to the retort by gravitation as hereinbefore described.

Fourthly. I claim the safety valve hereinbefore described and represented, for the purpose of preventing too great a pressure of gas accumulating in the retorts or gasholders.

Fifthly. I claim the arrangement of heating apparatus applied to baths as hereinbefore described.

Sixthly. I claim the gas ventilating apparatus arranged and applied as hereinbefore described.

Legal Intelligence.

VICE-CHANCELLORS' COURT.

April 22.

(Before Sir J. Parker.)

IN RE THE UNIVERSAL GAS LIGHT COMPANY.

Mr. Greene moved, on behalf of two of the contributories of the above company, to discharge or vary an order of the Master, allowing the claim of Mr. Brooke as a creditor of the company in respect of a sum of £439. 1s. 9d. The company was formed in 1845 for working Francis's patent for making gas, and was provisionally registered in the month of October of that year. In the ensuing January Mr. Brooke became a member of the provisional committee. On the 30th of May, 1846, the company was again provisionally registered for the purpose of making gas according to the patent of Messrs. Corden and Smith. In September, 1846, the company was completely registered, and carried on business until March, 1848. Mr. Brooke had, however, retired from it in July, 1846. Actions had been brought against Mr. Brooke and other provisional committeemen to recover sums due for goods sold and delivered to, and work done for, the company before the second provisional registration had been made. Mr. Brooke had paid a portion of these amounts, and also certain costs incurred by him in defending those actions, and all these payments the Master had allowed. The Master's order was resisted on the ground that there had been two distinct companies; that the first had been abandoned, and the second subsequently established to work an entirely new patent; and that the payments made by Mr. Brooke, for which his claim had been advanced, were on account of the first company.

Mr. Malins and Mr. Henry Stevens, for Mr. Brooke, contended that, although the provisional registration had been changed, the company still preserved its identity, for that it was composed of the same individuals, having precisely the same object in view, the only difference being that another process of making gas had been proposed to be made use of. By a clause in the company's deed of settlement, all the proceedings of the provisional directors in establishing the company were recognised and adopted, and made as binding upon the company as if they had taken place after the date of complete registration.

Mr. Roxburgh appeared for the official manager, and claimed his costs. The learned counsel insisted that, before the present appeal to the court was undertaken, application to the Master should have been made to reconsider and review his order, as was prescribed by the 17th section of the Winding-up Act of 1848.

His Honour said, that as to a sum of £30. 17s. 9d., a portion of the amount allowed by the Master, he must refer it back to him to review his decision. As to the remainder of the sum of £439. 1s. 9d., his Honour said that he would allow so much of it as did not relate to the costs of defending the actions brought against Mr. Brooke, but that he could not allow those costs. There could be no costs on either side, but those of the official manager must come out of the estate.

May 8.

(Before Vice-Chancellor Sir G. Turner.)

THE SHEFFIELD UNITED GAS COMPANY *v.* THE SHEFFIELD CONSUMERS' GAS COMPANY.

This was an application for an injunction to restrain the defendants from laying their pipes in the streets, roads, and highways of Sheffield. Sir Page Wood, with a junior counsel, appeared for the plaintiffs; and Mr. Daniel, with two juniors, for the defendants.

On the case being called on, his Honour suggested that, as this was the last day of term, and it was probable the hearing would occupy more than one day, whether it had better not be postponed till the first day of next term. This was assented to by all parties, the defendants undertaking, in the mean time, not to lay any pipes, or commit any other act prejudicial to the plaintiffs, and in opposition to the prayer of their bill.

COURT OF COMMON PLEAS,

April 19, 1852. (Sittings in Banco.)

Before Chief Justice Jervis, Mr. Justice Cresswell, Mr. Justice Williams, and Mr. Justice Talfourd.)

HEDLEY *v.* THE SURREY GAS CONSUMERS' ASSOCIATION.

Mr. Sergeant Shee said that this case was tried before Mr. Baron Parke at the last assizes for Surrey, when a verdict was entered for the plaintiff upon all the issues except the fourth, upon which the jury gave a written verdict; and his motion now was for a rule to enter a verdict for the plaintiff upon that fourth issue, or for a new trial.

The Chief Justice: The ground, if you please.

Mr. Sergeant Shee: The verdict, we believe, is now entered for the defendants upon this issue, whereas it should be against them.

The Chief Justice: Then that is misdirection, if the judge should not have so entered it.

Mr. Justice Cresswell: You have leave to move to alter it?

Mr. Sergeant Shee: No.

Mr. Justice Cresswell: Then we cannot grant you this rule.

Mr Sergeant Shee: Unless you are of opinion that it is, in fact, a verdict for the plaintiff. It unfortunately happened that the trial lasted till a late hour, and then the jury retired, and came into court again at past eleven o'clock at night, and gave this verdict, and the judge entered it for the defendants; and he was afraid, therefore, that, in strictness, the motion must be only for a new trial. The plaintiff was a gas engineer, and the declaration stated that, in consideration that the plaintiff would enter into the service of the defendants as gas engineer at a salary of £300 per annum, the defendants promised to continue him in their employment until the expiration of six months after notice given by either party to put an end to such employment, or to pay a proportionate amount of the salary for six months; and the breach was, that they dismissed him before the expiration of a year without giving him six months' notice. He believed that his learned friend (Mr. Edwin James) was instructed to move on the first issue, that the defendants did not promise, to enter the verdict for them.

Mr. Justice Cresswell: The first plea was non assumpsit.

Mr. Sergeant Shee: Yes. The second plea was, that there was a certain condition annexed to the promise that the plaintiff should, at any time during the year, on request, give security satisfactory to the solicitor of the association for the performance of his duty, and that he did not give such security. The third plea was, that at the time of the making of the promise the plaintiff represented to the defendants that he was competent, and had sufficient knowledge and skill to act as engineer to the defendants, and that the defendants made the promise on the faith of and in the belief of the truth of such representation; but that, in fact, he had not sufficient knowledge and skill, and was incompetent to act as such engineer, whereby they lost the custom of divers persons, and on that ground they dismissed him. The fourth plea was, that after the making of the promise, and after the plaintiff had entered into their employ, it was his duty, as such engineer, well and carefully and diligently to serve the defendants in such capacity, and to inspect and superintend the construction of the engineering works of the defendants, and put them into an efficient state, and to provide and supply good and sufficient gas to all persons who should become customers of the defendants; and that he misconducted himself in not carefully and diligently constructing and maintaining the works, by reason whereof the works were constructed in an wholly inefficient manner, and remained in an wholly inefficient state; and that, while the plaintiff remained in their said service, 50 persons became consumers of the gas of the defendants, and that, while the plaintiff remained in the defendants' service, he did not supply the said customers with a good and sufficient supply of gas; but, on the contrary, the gas was bad in quality, and wholly insufficient in quantity, and such customers refused to continue to be customers, and, therefore, the defendants dismissed him. The fifth plea was, that the plaintiff bargained to manufacture gas at a cost which would enable the defendants to sell it at 4s. per 1000 cubic feet, and that the plaintiff failed to do it, inasmuch as he manufactured it at a cost much greater than that which would enable them to do so. The sixth plea was, that, while the plaintiff was in the defendants' employment, he habitually neglected his duty. And to these pleas there was the replication de injuria; and ultimately the learned judge was clearly of opinion

as to the second plea, which stated that the plaintiff was to give security, that there was no proof of such condition, and, in fact, it was proved to be entirely different; and, as to the fifth, that it was not proved that there was such a bargain, and that there was no proof of the sixth plea, of habitual neglect; and he left the case to the jury, expressing his own opinion that they ought to find for the defendants on the third and fourth pleas, those pleas being incompetency, and that he misconducted himself in not constructing the works efficiently for the manufacture of gas, and that the gas was not of good quality, and was insufficient in quantity. The judge certainly did submit to him (Sergeant Shee) that it might be right for him to retire from the contest; but he was surprised at such an intimation, and did not retire; and then the case was most fairly summed up by the learned judge, and the result was that the jury found the third issue, which imputed general incompetency to the plaintiff as an engineer, for the plaintiff.

Mr. Justice CRESSWELL: What time was it in the morning when the verdict was given?

Mr. Sergeant SHEE: It was late in the evening.

The CHIEF JUSTICE: If you were manager of the gas works, you could throw as much light as you pleased on the case at that time. (A laugh.)

Mr. Sergeant SHEE: The case lasted three days.

The CHIEF JUSTICE: Then you cannot complain that it was not fully tried.

Mr. Sergeant SHEE did not complain; he was not in a condition to complain of anything; he only said that the judge took a strong view against him, and that there must be further inquiry. Upon the fourth plea, the jury came in with a written verdict. He had the record of this verdict, but whether the jury stated in terms that it was for the defendants he was not sure; but, however, the learned judge took the verdict for the defendants. What they found was this:—"Verdict for the defendants; but, at the same time, we consider the plaintiff generally competent as a gas engineer; but that he had not sufficient time and means to carry out the instructions of the company, and we think him entitled to six months' salary."

The CHIEF JUSTICE: That means, "Verdict for the defendants; but we think, in common courtesy, you should make him an allowance, and he leaves the court without the slightest blemish on his professional character." (A laugh.)

Mr. Sergeant SHEE: When all the facts were looked into, they would amount to something other than that. The learned judge, acting of course under the impression of propriety in so doing, so addressed the jury that they were induced to say "for the defendants," when, in truth, they meant for the plaintiff; and there was no pretence for giving that verdict upon the evidence, and his lordship was mistaken in the view he took of it.

The CHIEF JUSTICE: What is the misdirection?

Mr. Sergeant SHEE: If the jury came in and said, "Verdict for the defendants," there was no misdirection; but he was under the impression that they came in with this written answer, and not that they found a verdict for the defendants.

The CHIEF JUSTICE: Then it must come back to the first point, that the verdict was against the evidence?

Mr. Sergeant SHEE: It appeared that the plaintiff, who was about 32 years of age, had been brought up to the profession of a gas engineer, his father having been an eminent gas engineer, and the plaintiff, through the whole of his life, had been employed as a gas engineer. He had been employed under his father for several years at some large works, and he had constructed gas works at Birkenhead and at Devonport, his last employment being at Devonport. He produced testimonials from his late employers, including those at Devonport; there was competition and inquiry as to the candidates, and on the 8th of June, 1851, the plaintiff was appointed gas enginner to this company, the appointment being entered on the minutes of the company—"Resolved, that Mr. Hedley be appointed engineer at a salary of £300 for the first year. Mr. Hedley to give security, with which the solicitor should be satisfied." It afterwards turned out that the security was to be that the works should not exceed the estimates, and no question was made about it at the trial. His duty was to construct works, and, when they had been constructed, to manufacture gas for the company. He at once set about making the works, and at first he was limited to £26,000; the sum was spent, but it was not sufficient to construct them efficiently, nor, as it turned out, for any purpose at all. When he became engineer, he found that the company had entered into a contract with an iron company in Derbyshire, to supply various castings for gas works, and they were also under a contract with the parish of Rotherhithe to light the parish on the 29th of September following. There was a difficulty in getting castings, and it continued until the time for lighting Rotherhithe had nearly arrived; and the company were under a penalty of, he believed, £100 a day to light the place. Mr. Hedley, with great exertion and considerable skill, which was often publicly acknowledged, contrived to get them out of that scrape; and he did succeed in lighting the parish, to the satisfaction of the parish, on the day appointed, and thereby did great service to his employers, and did that which few other engineers would have attempted. That having been got over, contracts were entered into by the company for lighting other districts in the neighbourhood of the works, all of which had been before supplied by companies established for a considerable number of years; and these companies had supplied gas inferior in quality—I think it was admitted—to the gas he undertook to supply, his place being to supply what was known as Scotch gas, which was obtained from a better description of coal; but it required a different kind of burner from the ordinary gas, and, if used with the ordinary burner, it would produce smoke.

The CHIEF JUSTICE: What is the difference between Scotch and English gas?

Mr. Sergeant SHEE would state the difference. The Scotch gas was made of cannel coal, and gives more light, and, if fully consumed by proper burners, was much more convenient for houses. It was a more costly gas, but then it gave a great deal more light; and although, to the eye, as one of the witnesses said, "it did did not flare up like the other," yet, if tested, it was a better gas. He did not propose to weary the court by going into the detail of the evidence which occupied three days, but he would state that the plaintiff, having gone into the service of the defendants in the month of January, the directors met the shareholders at a public meeting on the 31st of March, and again in September and November; and on all these occasions they publicly expressed their sense of the good conduct, ability, science, and skill of their engineer, and spoke of him in the highest terms; and they never found any fault with him up to the 24th of December, when they dismissed him by a resolution in these terms:—"That Mr. Hedley be forthwith removed from his office of engineer; that the directors, cautiously abstaining from any acknowledgment of liabilities to him for services as engineer beyond the present day, will consent to pay him his salary at the rate of £300 per annum, up to the period when his resignation on the books of the company will come into operation; and will also take into consideration what amount of compensation shall be paid to him for his past services and loss of office—the whole dependent upon his good behaviour to the company." This resignation alluded to had been given as from January, but it was agreed that it should not operate.

Mr. Justice CRESSWELL: In July it came into operation, and then they offered to pay him half a year's salary.

Mr. Sergeant SHEE: They never did it.

The CHIEF JUSTICE: It was subject to good conduct towards the company.

Mr. Sergeant SHEE: On the 8th of December, 1851, the association employed a very eminent engineer named Clegg to report on the state of the works; and he made a report bearing date the 19th of December, 1851, which stated that he had put two tons of coal into the retorts to see how much gas would come from it, but that, from some leakage, the experiment was not satisfactory. The works, however, were generally well and simply arranged, and they did the engineer credit. This report was made under a formal order of the board, and it was made at a time when it was hardly to be expected that the works would be in such an efficient state. Mr. Clegg, in his verbal evidence, made some observation on the want of a condenser, what was used for that purpose being a long pipe, which appeared to be amply sufficient. In addition to the evidence of Mr. Clegg, they had the evidence of five or six engineers and gasfitters, all men of competent ability in their profession; and they all spoke to the efficiency of the works, and to the correctness of the principle upon which they had been constructed; and they expressed their complete approval of what Mr. Hedley had done, and their wonder that it could be done for so small a sum; although, to the eye, it was not finished as they could wish. It also appeared upon the evidence that, at the date of this report of Mr. Clegg, the company were in the greatest pecuniary embarrassments. They had expended, by their balance sheet, £45,000; they had received from the shareholders only £15,000; they were under liabilities which they had contracted to the amount of £20,000 or £30,000; they had received money from their bankers on the security of the promissory notes of three or four of the directors, to the extent of £8000; and they had applied for more, and been refused; and they were, in fact—he did not mean to say in a state of insolvency—for the value of the works was considerable, and they held the freehold ground upon which the works stood—but they were in great want of money. They had endeavoured in vain to get it; and they had, as would appear, very excellent reasons for dismissing Mr. Hedley, besides the reasons they stated in their pleas. In this state of things the report of Mr. Clegg, who had been authorised to report at a board meeting, having been sent in, Mr. Thwaites, who was not a shareholder in the company, but who was a member of a gas consumers' association in the district, busied himself about the manner in which these works had been constructed, and the supply from the works. This Mr. Thwaites took a gentleman named Croll to the works to examine them, and they took with them the deputy chairman of the association, Mr. Pocock; and they went to the works without any notice to Mr. Hedley, who was not there when they went, but who arrived before they left. He believed Mr. Croll was there about half an hour, and he had no authority from anybody to go, his employment never having been submitted to the directors; but, nevertheless, he sent a letter to the directors, which stated that, having been requested by Mr. Thwaites to examine the works, he had done so, and had found them in a most deplorable condition; the first thing being the want of any means of constructing gas at a proper price, for every 1000 feet would cost 5s. He then stated that he had submitted a proposition to Mr. James, the solicitor, which he had no doubt would be properly explained to the board. This gentleman had no authority whatever to go to the premises, but he had resolved to go with Mr. Thwaites, and they had asked the deputy chairman to go with them; and, although he said he regretted that he was in a condition which "compelled" him to make such a report, he was not, in fact, compelled to do so, and it was done for his own purpose, that purpose being to become lessee of the works, and to furnish the gas. He had, therefore, a direct interest in tripping up Mr. Hedley, and he went there voluntarily and made his report; but the main inducement was that the company wanted money, and Mr. Croll agreed to procure it for them. This report was made on the 20th of December, and on the 24th they came to a resolution, by a majority of one only, dismissing Mr. Hedley. In answer to the evidence which he had stated to have been given, no engineer was called on the part of the defendants, except this Mr. Croll. The works were at Rotherhithe, to be seen by anybody; and there were plenty of competent engineers in London whom the defendants might have called, but not one was called, and it rested entirely on the evidence of Mr. Croll. He stated that the works were not well constructed; but so little reliance was placed upon him that Mr. Bramwell, who addressed the jury, admitted that they were sufficient. Mr. Croll gave evidence that the works were not sufficient, but it turned

out that there was no pretence for anything of the kind. He said that he took possession on the 25th, up to which time the supply had been insufficient; but the supply immediately increased, and, during the next week, there was enough for all purposes, and in the course of a fortnight there was as much gas as was required, and all complaints ceased; and, in answer to the question, how much he had expended upon the works in that fortnight, he said not above £20.

The CHIEF JUSTICE: That showed what a very little sum of money was necessary with skill.

Mr. Sergeant SHEE would state exactly what it was. Mr. Hedley was constructing an additional flue, but it was not completed. Mr. Croll at once condemned it, and he put up two small iron pipes instead; and that was the whole of the alteration which he made to make the works, according to his own view, efficient. The learned judge was very much impressed with the evidence of Mr. Croll, and by a drawing which was presented, on which the height of the gas-holder at certain times before Mr. Hedley had left, and at certain times after, were shown by black lines. But this turned out not to be evidence at all, for it was drawn up after Mr. Hedley had left, and under the direction of Mr. Croll; and, although it was a thing not properly in evidence, it could not fail to produce an impression in the minds of the jury. In addition to the evidence of Mr. Croll, and of Mr. Anderson, his assistant, there was no evidence to contradict Mr. Clegg.

The CHIEF JUSTICE: There was the result; complaints and no complaints.

Mr. Sergeant SHEE: No doubt, to some extent, that was the result; for it turned out, according to the evidence of Croll, that, after he had taken possession of the place, the gas increased in quantity, and some persons who had been before dissatisfied became satisfied. It appeared that Mr. Hedley was informed of dissatisfaction through having some complaints brought to his notice by Mr. Pocock, not at the weekly board, but as complaints of individuals, who stated that their gas was insufficient in quantity, and smoked, and did not "flare up." He then stated that the burners were not suited, and that it was necessary that they should be supplied with other burners, which could be fitted complete for 3d. each; but the company did not choose to adopt that suggestion, and to some extent, therefore, they were to blame. In addition to this complaint of smoking, it was stated that a considerable number of persons complained of insufficiency of supply. Now, there was no complaint of that previous to the 14th of December. It appeared that in the neighbourhood of the works, which was supplied with gas, something had been said; but they could not make out that more than seventeen persons had complained, and during the time of their complaints there were large additions to the number of consumers. In addition to that, it was shown that the complaints were very partial, and there was really no just cause of complaint against Mr. Hedley, who had the strongest evidence of the sufficiency of light; for the commissioners for lighting and paving Rotherhithe had been supplied with gas, and Mr. Christall, one of them, said it was perfectly satisfactory to them. Again, the number of persons who were called to prove that their gas was insufficient did not exceed six or seven people, and of those persons who were called three lived at the extremity of the works; another lived at Deptford, and, although he complained, he had positively, seeing how all his neighbours were supplied, been one of the last persons to apply for gas, he having applied on the 18th of December. Then it appeared that the company had employed persons whom they called inspectors, to see in what way the lamps and shops were served; and three of those persons were called, and they got their books from them in cross-examination, and it turned out that in all their books the entries were, day after day, "good," "very good," "generally good." Then, again, there was this observation—which could not fail to strike the jury, though it did not produce such an effect on the learned judge—the inspectors were only employed between six and seven in the evening. After that, when it was to be supposed that the gas would become insufficient, there was no evidence whatever to prove it. Everybody agreed that gas works could not work well at first; and, bearing in mind that the necessary castings were not got until the beginning of December, the evidence of insufficient supply was certainly most imperfect, and the great preponderance of evidence was in favour of the plaintiff, not only as to having constructed the works, but having done all that was required of him, as engineer, to supply the customers. Then there was this fact, that the works constructed by Mr. Hedley, with the small expense of £20, were made adequate to all the wants of the company.

The CHIEF JUSTICE: I tried a Derby gas case not unlike this. The engineer left, for he could not make an ounce of gas, and he said so; and then they called in another man, who altered two holes in a reverbatory furnace, and it went on very well. A very small matter might do it.

Mr. Sergeant SHEE: But the plaintiff here was constructing a flue at the time Mr. Croll came in; and then Mr. Croll, instead of suggesting to him to put up a pipe instead of it—he having his own interest in mind, and his own desire to become lessee of the works—he said that they were in a deplorable condition, and that the engineer was incompetent. Supposing it was an improvement that would not have occurred to Mr. Hedley, it could not be said that for such a matter a man was wholly incompetent, or false in his duty to his employers, because a suggestion to him might be made so as to enable him to do all that was required. But that was the result of the case; and he submitted that on that evidence the result was not satisfactory, as there was nothing to prove that the works or the supply were insufficient; and, although there was a good deal made of the complaints, yet, when they were reduced to their proper weight by careful examination of what they really came to, they amounted to nothing. He believed that there were only seven customers called to prove that the supply to them was insufficient; and there was proof of numbers coming in every day, and proof by the inspectors, that the gas was good up to six o'clock in the evening. There were no reports produced after that time, and the case went to the jury, certainly, with a strong impression on the part of the learned judge that Croll was to be depended on, and not Clegg, the learned judge leaning over and saying to him, "Have you not had enough of it?" just as he was about to address the jury. He had nothing to complain of in the summing up, except the strong manner in which the learned judge expressed his feeling that the verdict should be for the defendants upon the third and fourth pleas, taking it for granted that it should be so, when the jury was very competent to try the question.

The CHIEF JUSTICE: That is just the view I am taking; they were most competent.

Mr. Sergeant SHEE: They did, by their finding, exonerate the plaintiff from many things.

Mr. Justice CRESSWELL: They found for the defendants upon the fourth issue.

Mr. Sergeant SHEE wished to call the attention of the court to the words of the finding.

The CHIEF JUSTICE: They could understand the latter part of the finding. The defendants themselves had said they would take into consideration some means of compensating the plaintiff, and he thought that the defendants should think, as they originally thought, that the plaintiff should be compensated.

Mr. Sergeant SHEE: They said that he was generally competent, but that he had not sufficient time and means to carry out the instructions of the company, and they thought him entitled to six months' salary. Now, as to there not being sufficient time and means, he would call their attention to the plea upon the record. The plea said that it was his duty, well, carefully, and diligently to serve the defendants, to superintend the construction of the works, and to supply good and sufficient gas to all persons who should be customers; and that he misconducted himself, and did not cause the works to be well constructed, and did not supply good gas. But the jury found that he had not sufficient time and means to carry out the instructions of the company; and, that being so, how could they possibly come to the conclusion that it was his fault, when they, in effect, said that it was not his fault, but that of others? They had the books of the company up to a fortnight before his dismissal.

The CHIEF JUSTICE: What took place proved the impolicy of getting the jury to answer questions instead of confining them to their verdict. It was impossible they could say how it appeared to the jury, but it might be this:—They found a verdict for the defendants, when one or two persons good-naturedly said, "We ought to say something to induce the company to give him something;" and the others said, "There is no objection to that; it won't alter the verdict."

Mr. Sergeant SHEE: They stated their opinion in writing; and it must be taken to be the opinion of all of them.

The CHIEF JUSTICE: Not in reference to the issue, for they said, "Verdict for the defendants; but we think him of competent skill, and they should make him some allowance." That was all.

Mr. Justice CRESSWELL: According to your construction, it should be, "We find for the defendants, but we think the plaintiff entitled to the verdict."

Mr. Sergeant SHEE: And I think that was what they did mean. (A laugh.)

Mr. Justice CRESSWELL: Then I do not see how you could say they were competent.

Mr. Sergeant SHEE: They might be misled when the judge was so determined upon his view.

The CHIEF JUSTICE: No; the more the judge is determined, the more the jury is determined.

Mr. Sergeant SHEE: That depended upon how the thing was done. Some judges never lost a verdict; some very frequently did. (A laugh.) He submitted, in fairness, that this gentleman had been found guilty of no neglect, nor any misconduct; for the jury could not mean to charge him with misconduct, when they said that he had not sufficient time and means to carry out the instructions of the company, and when it was clear that the very castings and pipes were not supplied until December, and when there was repeated evidence in the books of the company that he had applied again and again for assistance to superintend the men, and that, on one occasion, when the gas was insufficient, the men had mutinied and got drunk. Then, when the jury came in, they found, upon the third issue, that he was competent as an engineer; and on the fourth plea, imputing misconduct, they said that he had not sufficient time and means. He submitted that this trial had miscarried, if the verdict was taken for the defendants. Surely it would be unfortunate that the injustice should be done of saddling him with the costs of these proceedings, instead of giving him damages, when the jury expressly found that he was free from all blame.

Mr. Edwin JAMES said he was instructed to move for a cross rule; but he was willing, on the part of the defendants, to let the matter remain where it was, although there was leave to move to enter a verdict for the defendants upon the general issue. They had offered to pay the plaintiff £150, to pay the costs, and let the matter remain as it was. He thought, by stating this, that he might save time.

Mr. Sergeant SHEE said he had only moved this rule under the impression that, although that offer had been once made, it had been since withdrawn.

The CHIEF JUSTICE: What is the offer now?

Mr. Edwin JAMES: They were perfectly willing to enter a *stet processus*, and leave the matter where it was.

The CHIEF JUSTICE: I think that is very liberal on the part of the defendants. (To Mr. Sergeant Shee): You had better take it.

Mr. Sergeant SHEE: I was under the impression that the offer was not still in existence. I will take it at once.

Mr. WILLES: The plaintiff is not to say in future that the company have done nothing for him, when they have relieved him of so much costs.

The matter was settled accordingly.

Miscellaneous News.

THE SURREY CONSUMERS' GAS LIGHT ASSOCIATION.

GENERAL MEETING OF SHAREHOLDERS.

On Tuesday, the 6th of April, the half-yearly meeting of the above association was held at the Bridge-house Hotel, for the purpose of receiving the report of the directors, and transacting other business. J. A. DOUGLAS, Esq., the Chairman of the Board of Directors, presided.

The CHAIRMAN, in commencing the business of the day, said that, since the last general meeting of the shareholders, many important events had occurred, which it was necessary for him briefly to allude to. In September last, at their meeting, one of the principal objects was to obtain the consent of the commissioners of Southwark to enable them to lay down their mains in the Borough. About the middle of October that consent was obtained, subject to a contract which was to be entered into by the association; and that contract was executed on the 6th of November. On the 7th of November they commenced laying down their mains in the High-street, Borough, and about the 13th of the same month their gas lighted in the High-street. Up to this time every thing seemed to be succeeding well and to their satisfaction; but as time wore on, they were unfortunately made acquainted with complaints of deficiency in the supply of their gas, and that the gas which they supplied was not of good quality. Inquiries, of course, were instituted by the directors, and it was with the greatest reluctance that they found themselves compelled to come to the conclusion that Mr. Hedley was not able to carry out the promise to them to furnish an ample supply of gas at remunerative prices. They were sufficiently satisfied with what they saw to be convinced that Mr. Hedley should be removed from his situation as the engineer of the association, and that a more competent person should be employed to supply his place; otherwise their only prospect was ruin, the winding up accounts, and the Court of Chancery. They were, therefore, compelled most reluctantly to dismiss him. This was a serious and unpleasant difficulty, and they felt that they would not be doing their duty to the shareholders if they had come to any other decision than the one they had arrived at. He might state to the meeting that the directors were not unmindful of the peculiar position in which this decision placed Mr. Hedley, and they were desirous of taking the case into their consideration, with the view of compensating him for past services, for they were not unaware that he was a young man whose prospects depended upon the exercise of his abilities. But he thought he should be able to prove to them that he had shown himself unworthy of the good feeling which the directors had for him. They all knew the libellous pamphlets that about this time were circulated. He did not mean to say that he was the author of all of them; but in many cases he supplied the information, and he even corrected the manuscripts. The directors found that their loss in the quarter was upwards of £800, and they therefore thought it their duty to waive any question of compensation, and to take into their consideration the gross mismanagement that had taken place. Mr. Hedley then commenced his action against the company. Reluctant as they were to go to law—for they felt convinced that heavy expenses must necessarily be incurred—they did all that, as gentlemen and directors, lay in their power to bring about an amicable arrangement of all disputes. With this view they offered to pay Mr. Hedley £175. To their surprise this sum was at once refused, although, to show the *animus* with which they were imbued, £15, as his costs, were offered to him to settle. He must now tell them that, from the form of Mr. Hedley's action, they were advised by their solicitor that, under no circumstances, could he recover more than £150. He was glad to find, from the summing up of the learned judge, that he had been thwarted in his proceedings. From the reports in the newspapers there might be some misapprehension as to the result of the case. The fact was that there were six pleas:—Upon the first there was no verdict; the second plea involved the question of security, and the verdict was for Mr. Hedley; on the 4th, 5th, and 6th pleas, in which the gist of the case lay—the competency of Mr. Hedley as an engineer—the verdict was in their favour. This, in truth, settled the whole action, and Mr. Hedley virtually lost it—the decision upon these three pleas carrying costs as against Mr. Hedley. He would now refer to the business before the meeting. They had a balance sheet before them, which had been duly audited and passed, and it might appear that the subscribers' capital was small as compared with the outlay; but he trusted that they would not be unduly alarmed on that account. They had at the present time no creditors who were very pressing upon their finances, and at present, he was happy to inform them, the gas rental was about £6000 a year. He could only say that, if they would give them their united and combined efforts, there was very little doubt that, upon that day next year, the rental will be more than double. (Hear, hear.) Let the shareholders only endeavour to get custom, and that was all they wanted; for, from the report of their talented engineer, it appeared that they were now in a position to supply the public with any quantity of gas that might be required. (Cheers.)

Mr. W. B. JAMES, the solicitor to the association, then read the report of the directors, which stated, amongst other things, that mains had been laid along both sides of the High-street in the Borough, and many of the inhabitants had been supplied with their gas. It then stated the circumstances connected with the dismissal of Mr. Hedley and the appointment of Mr. Croll as engineer, and that the arrangement with Mr. Croll would entitle them to a profit, which would enable the directors to declare a dividend of 4 per cent. per annum for the quarter ending the 24th of June, and payable upon the 1st of July. On the 20th of December last it was impossible for the most sanguine person amongst them to predict so great a delivery out of their difficulties, and it was now thought that a dividend of not less than 6 per cent. for the next year might be confidently anticipated. Since Mr. Croll had been connected with them the gas had improved in quantity and quality, and it had daily increased in quantity, and at the present moment, and for some time past, all complaints had ceased. Dr. Leeson, of Guy's Hospital, had been appointed chemical referee, and he was at liberty to test the gas as often as he pleased; and they had also appointed an inspector of meters. It had been industriously circulated that they were in want of funds, but this was not the fact; for the company were not now in want of funds, all they wanted was custom. Messrs. Pocock and Beresford would to-day go out of the directory, but were eligible for re-election, and Mr. Walton had retired. In his place Mr. Clark had been placed, but his appointment required confirmation. On the 1st of July they would receive from Mr. Croll £900, which would enable them to pay a dividend of 4 per cent., and leave a balance to be placed against the loss they had previously sustained. The document concluded by expressing the belief of the directors that a supply of good and cheap gas for the future was secured beyond all doubt. (Cheers.)

The CHAIRMAN then proposed that the report be received and entered upon the minutes; and that a dividend of 4 per cent. per annum be declared for the quarter ending on the 24th of June next.

The DEPUTY-CHAIRMAN, in seconding the motion, wished to make some remarks relative to the important matter in the report, and to explain in a plain manner how it was that they could declare this dividend of four per cent. It appeared, as far as his acquaintance with gas went, he did not think there was another man besides Mr. Croll who could make gas and sell it at 4s. with a profit. Under his management it was quite clear that they would be in a position on the 24th of June next to pay 5 per cent. interest on all their debts—give the shareholders 4 per cent., and have a large surplus then in hand. If their creditors received 5 per cent. upon their money whilst it was unpaid, they would be perfectly satisfied. Their rental on the 24th of June would be £9000, and 5 per cent. upon all their debts would amount to a little more than £500. Then the office expenses, and the payment of 4 per cent. dividends also, would take £320, leaving them £80 in hand. Their rental on the consumption of gas was now about £6000 per annum; and he believed it would soon be double that amount, £12,000, which would give them £5000, according to their arrangement with Mr. Croll, and that would pay a dividend of 8 per cent., leaving an amount in hand.

A DIRECTOR: £12,000 would give 10 per cent. dividend.

The DEPUTY-CHAIRMAN liked to be within bounds, and he was laying before them that which was probable. He had heard many of their friends talk of twenty, thirty, or forty thousand pounds rent, but could there be any difficulty in doubling their rental in six months? (No, no!) He thought that in September next they might confidently, and honestly, and legitimately, declare a dividend of from 6 to 8 per cent. without any infringement upon the capital. (Cheers.)

The CHAIRMAN said, he felt great pleasure in hearing so good a statement, and he would have great pleasure in proposing Mr. Pocock for re-election as a director.

A SHAREHOLDER wished to know if it was true that some of their customers in the Walworth-road had left them within the last fortnight on account of the want of gas?

Another SHAREHOLDER said, nothing of the kind had happened since Mr. Croll has been with them.

A third SHAREHOLDER said he had been short of gas, but it was in consequence of having an improper pipe; and that having been altered, there had been no want of gas since.

Mr. CROLL stated that they need be under no apprehension as to the supply of gas, for at the present time the retorts had to stand idle for several hours, the gasholders being full, until some of it was taken away for consumption. To himself, this resulted in considerable loss in the destruction of fuel, and other expenses. They were not in a position to take on an unlimited number of consumers, but he would have good care not to take on too many. He urged upon the shareholders present the importance of getting fresh customers.

A SHAREHOLDER inquired how long it would be before the pipes would be laid down in Long-lane?

The DEPUTY-CHAIRMAN said the pipes were ready, and he thought he could confidently say, that the work would be completed in at least three or four weeks.

The resolution was then carried unanimously.

The next proposition was, that the forfeiture of the shares specified in a certain list be confirmed, and that the directors be authorised to sell the same by public auction to the highest bidders.

The resolution was, after some discussion, carried unanimously.

The CHAIRMAN then proposed, that Mr. Thomas Pocock be re-elected a director.

Mr. FARLEY had great pleasure in seconding the motion. He did not know Mr. Pocock until the existence of this association, but he thought he could not speak too highly of him.

A SHAREHOLDER wished to know what number of directers were necessary according to the deed?

The CHAIRMAN: Not less than 8, nor more than 12; and there were 10 at present.

The SHAREHOLDER thought, if the number was reduced to 8, that it might save expense.

The CHAIRMAN said, he believed he was the oldest member of the directory; he was very lame, and he had spent about £200 in cab hire, &c., about the company's affairs, and had not received a shilling.

The DEPUTY-CHAIRMAN: There had been no expenses at present; it had been all money out of pocket. (A laugh.)

The motion was unanimously carried.

The re-election of Mr. Francis Marcus Beresford as a director was then proposed and seconded.

Mr. BRICKHILL rose to propose an amendment. On a former occasion, he had put the question to Mr. Beresford, whether he had not negotiated with the old companies to turn them over, and he answered that he had. He thought he (Mr. Brickhill) said on that occasion, that he intended to make money of them, but that was saying too much; but he thought that if he was not enough a man of business

to see his way out of their then difficulties, he was not fit for a director. (Hear, hear.) He also thought that the number of directors should be reduced to 8; and, if it was found necessary to have more, they could put others upon the board on another occasion. It was well known that 5 or 6 had done the work all through.

A SHAREHOLDER seconded the amendment, which, he said, he understood to be, that Mr. Beresford was not worthy of the confidence of the Surrey Gas Consumers' Association.

Mr. BERESFORD said it was quite true that, on a previous occasion, Mr. Brickhill came with a resolution to dismiss him from the directory; and the ground upon which he did so was, that he had been to the old company to sell the Surrey Gas Consumers' Company. He said then, and he repeated it now, that what he did was done in an awful crisis of this company, and when they were within an ace of getting under the Winding-up Act, and although he would not say he went with the sanction of the board, yet he did what he did with their full knowledge. He did not stipulate to sell the company, but that the shareholders should have 20s. in the pound, and that the consumers should have gas at 4s. He would esk the deputy-chairman if this was not so, and whether they were not to be paid 20s. in the pound for all they had laid out. This, it must be borne in mind, was before they had entered into the arrangement with Mr. Croll. This was his answer to Mr. Brickhill; and when he said, on a former occasion, that he had endeavoured to sell the company, he threw back the charge, and retorted that he was above pecuniary temptation. He had also said that he (Mr. Beresford) was not enough a man of business to be a director; but was it not business to ask for 20s. in the pound upon their expenditure, and to secure gas at 4s. per 1000?

The DEPUTY-CHAIRMAN said that he had carefully watched Mr. Beresford's conduct, and he believed that in all matters upon which they had not agreed it had not been an error of the heart but of the head, and arose from his thinking that he was right. (Hear, hear.) He was inclined to wish that Mr. Beresford should return again to the directory, for he believed him to be a really honest man, and straightforward in all his actions. He believed that he had no intention to sell the company, and to put money in his own pocket.

Mr. FARLEY thought that the explanation which had been given to the meeting ought to satisfy them.

Mr. THWAITES said he had no right to have an opinion upon this matter, but he had been asking Mr. Beresford a question, and in justice to him, they would be ready to listen to his answer to an allegation which has been made against him. A report had gone abroad that Mr. Beresford was an enemy to the arrangement they had entered into with Mr. Croll. He (Mr. Beresford) said it was unfounded, and that he would use his best exertions to carry out the arrangements. He hoped Mr. Brickhill would not press his amendment further, for it was important to have unanimity at present. (Hear.) It was said that he (Mr. Thwaites) was not paid for what he had done, but he had been most amply paid, for he had had all sorts of complimentary statements made about him in black and white (laughter), and he really began to think that he was of some importance.

The DEPUTY-CHAIRMAN hoped that Mr. Beresford would pledge himself to his brother directors to take the same share and equal amount of responsibility with them; for if they were eight or ten, or whatever number, he thought they ought all to bear the burden alike. (Cheers.)

Mr. BERESFORD expressed his obligation to Mr. Thwaites for his kindness to him; for he was not until now aware that any report was about that he wanted to frustrate the present arrangement with Mr. Croll. He had fought against the terms offered, whilst it was an open question, and he believed that every hour he fought against Mr. Croll had done good for the shareholders; but since the arrangement was made he had been heart and hand with him. (Hear, hear.) This attack against him had been brought forward by a man who had not scrupled to publish those pamphlets against the company. (Hear, hear.) As to the deputy-chairman's question, he had gone "the whole hog" with the directors up to a certain point. A resolution was put at the board some time ago, that if any director should not pay in advance, and if he objected to sign any bills, he was respectfully requested to resign his seat, and he had acted in accordance with that resolution. If he remained at the board, he was quite ready to do what was necessary to the fullest extent to act with his brother directors.

A DIRECTOR said: After this explanation he should be very happy to vote for Mr. Beresford. He thought it would be better to withdraw the amendment.

Mr BRICKHILL said: Although he was almost induced to withdraw his amendment, he was not quite decided. He knew what they did not all know, that Mr. Beresford was the restive horse that would not go in harness. Having frequently gone to the works, he had never seen Mr. Beresford there, and he had known him as the stumbling-block in the way of a good thing. The directors had been signing bonds and making themselves personally liable, and it was not right to have gentlemen who would not take their fair share of the burden. If gentlemen thought fit he would withdraw his amendment.

The amendment was then withdrawn, and the original motion was carried unanimously.

The question of the confirmation of the election of Mr. Clark was next placed before the meeting.

Mr. THWAITES said it had also been reported of Mr. Clark that he was desirous to upset the Croll arrangement.

The CHAIRMAN explained how the question of Mr. Clark's election stood. Since their last meeting a vacancy occurred at the board, and the directors had elected Mr. Clark to the vacancy, but his election must be confirmed by a meeting of shareholders.

Mr. CLARK said, what Mr. Thwaites had informed them of was quite new to him. When Mr. Croll's proposition came before the board, he thought they could make a better one, and he did not, therefore, accede to his proposition the first time it was laid before him. On the first occasion it was said that they must sign the paper within two hours, but he declined to do so, and that led to good.

Mr. DUVALL asked Mr. Clark whether he would make himself equally responsible with the other directors?

Mr. CLARK had no hesitation in saying yes at once. (Cheers.) He was already responsible. He had never hesitated to sign a bit of paper (a laugh), and he believed that Mr. Pocock had a bit of paper of his to a large amount, which he had not used.

The resolution was carried unanimously.

Thanks were then voted to the chairman, to the directors, and to the solicitor, and the business of the meeting was at an end.

GREAT CENTRAL GAS CONSUMERS' COMPANY.

The second general meeting of the shareholders of this company, under the Act of Incorporation, was held on the 30th of April, at the London Tavern. Mr. Thomas Dakin, the chairman of the board of directors, presided. At the outset of the proceedings, a great deal of discontent prevailed in the meeting, in consequence of the room in which it was held not being so large and commodious as the one set apart for the purpose on previous occasions; and many complaints were made.

The CHAIRMAN said that there were too many persons present to be placed in that small and inconvenient room, and he was obliged to say that it was rather owing to a breach of faith that they were there. Their secretary, thirteen days ago, waited on Mr. Bathe, and he said that he would give them the room they were accustomed to meet in, and now they found that this was the only room that Mr. Bathe could give them. He regretted that it was so.

A SHAREHOLDER: Oblige us with a few chairs, or adjourn till next week. (No, no. Proceed.)

The CHAIRMAN (to Mr. Fraser): Can you get any forms?

Mr. FRASER: No, sir.

The CHAIRMAN said they could only take care that at the next meeting they would go to a place where they could get a better room. (Hear, hear.)

The advertisement convening the meeting, and the following Report of the Directors, were then read:—

"We have the satisfaction to announce to our shareholders, and through them to the citizens, the gratifying fact that we have at length surmounted all impediments to the successful establishment of our company upon the basis originally contemplated. In spite of a long-continued opposition, we have obtained from the Corporation, and the Commissioners of Sewers, the appointment of independent public officers, to exercise the duties created by the Act of Incorporation, which was brought in and passed at our own solicitation, for the regulation and government of ourselves and our successors, as long as the company shall last.

"A competent inspector, accessible at all times, has been appointed to test and stamp our meters. An eminent practical chemist examines and reports upon the purity and power of the gas we supply, and well-known public accountants officially examine and certify our accounts. We have, then, succeeded in firmly establishing by law and practice a completely novel, but perfectly sound, system applicable to gas, and all other objects in which the public service and private enterprise are blended—a system of regulated management, equally removed from the blighting influences of centralizing authority on the one hand, and the recklessness of peculation and selfishness of monopoly on the other.

"In conformity with the practice which it is our intention to pursue, we yesterday transmitted to the shareholders a copy of our half-yearly balance-sheet, showing the profit and loss and the balance available for dividend. The official auditors also forwarded a debtor and creditor statement and balance-sheet, signed by them, showing the previous state of our accounts from the formation of the company, and its first receipts in October, 1849, to the 30th September last.

"Our half year's accounts would have been also laid before the official auditors for their certificate, but from the terms of their appointment it appears they could not now officially examine the balance-sheet for the present year; they have, however, said that, from the competence of our clerks and the manner in which the accounts are made out, they may be safely acted upon in declaring the half-yearly dividend, leaving them to be more minutely examined and certified at the end of the present year.

"A copy of these several accounts we have annexed to this report, from which it appears that we have a balance of profits in hand amounting to £12,796. 1s. 6d., after paying all charges up to the 30th of March last, out of which the directors recommend a dividend on capital at the rate of 10 per cent. per annum, amounting to the sum of £7250, be declared for the half year ending March, 1852, and a further dividend of 2½ per cent., amounting to £1808, for the half year ending the 29th of September, 1851. The effect of this will be, that the shareholders will have received 7½ per cent. dividend to September last upon the whole of their shares from the day on which their calls were severally paid up, and 10 per cent. from the 29th of September to the 30th of March last.

"We recommend that the dividends at these rates, amounting together to £9058, shall be made payable on the 1st day of June next, after payment of which the directors will have in hand available for future dividend the sum of £3638.

"The board intend at the next half-yearly meeting, in October, to recommend that the dividend shall be declared for one quarter only up to June next, and thenceforward that it shall be declared half-yearly up to the 31st of December and the 30th of June in each year. By adopting this course we shall be able to appropriate the earnings of a summer and a winter quarter each half year, and the dividend will be paid instanter, instead of being made payable, as is generally the case, at a future day. Another advantage resulting from this change will be, that time will be given for the official auditors to examine and certify each half-yearly balance-sheet up to the time each dividend is declared.

"Although the accounts we now present exhibit a state of almost unexampled prosperity in the history of gas companies, we still feel that a full and candid explanation is due to the shareholders of the circumstances which have prevented our realising the anticipation shadowed forth in our report in October last.

"From the produce of the two preceding summer quarters, we then estimated that our rental upon the entire year would amount to £53,000, and, taking into account the increase upon which we thought we had a right to calculate, we concluded that out of the earnings of the two winter quarters we should have been enabled at this present half-yearly meeting

to make up the dividends 10 per cent. from the formation of the company to the present time. The balance remaining in the hands of the company, after paying the dividend now about to be declared, would be sufficient for this purpose; besides which, we deem it necessary, in the present state of our concerns, to retain a sum in hand to maintain our rate of dividend during the summer quarters, leaving it to the anticipated improvement in the rental, to which we shall hereafter revert, to provide the 2½ per cent. for the first two half years, so as to bring the amount up to the act-of-Parliament standard of 10 per cent. for the whole period.

"We request your patient attention to a plain narration of the circumstances which have prevented the increase of our rental in the manner we had expected, and we solicit your approval and active co-operation in the course of proceedings we have adopted, by which we confidently believe our most sanguine expectations, as to increased rental, will be promptly and fully realised.

"The balance-sheet which the directors have sent round for the deliberate consideration of the shareholders will inform them of the precise state of the capital account to the 30th of March—£202,465. 9s., approximating very closely to the estimate contained in our report of September last, namely, £200,806, and the balance of profit from the revenue account, according to official auditors' report, exceeding our estimate by £1335. 1s. 8d.

"The £150,000 share capital being raised, the directors, in accordance with the vote at the last meeting, made arrangements to issue the debentures necessary for the discharge of the mortgage, and the payment of the extension works. The debentures now issued amount, as per balance-sheet, to £47,600.

"Your directors had some difficulty in arranging for their issue, as the act of Parliament directs that before any debentures are issued the whole of the share or capital of the company shall be signed for, and one-third paid up; the latter condition was complied with, but how to obtain signatures for the £50,000, and execute such a deed of trust as should protect the company from their being claimed, was the subject of much deliberation. The legal advisers of the company suggested that the directors should sign the deed and a deed of trust, and, as an equivalent for this liability, that the 750 shares issued to Messrs. Rigby, and returned by them under the deed of arbitration, should be allotted to them pro rata. To this arrangement the directors agreed, and they accordingly signed the deed for the 5000 shares, and a legal instrument by which they hold them as trustees for the company.

"When this company was formed in 1848, the promoters adopted as the basis of their calculations the principles propounded by Mr. Charles Pearson, that the citizens of London, being a numerous body of large gas consumers crowded together in a small space, were entitled to receive better, as well as cheaper, gas, than the inhabitants of localities thinly populated with consumers of gas.

"Applying this principle to a consumers' company, formed to supply themselves within this City, we, after mature deliberation, adopted Mr. Pearson's proposed standard, namely, a maximum charge of 4s. per 1000 cubic feet—a sum at that time denounced by all the gas companies, and by many respectable and honourable men, as below the price at which it could possiby be sold.

"Gas in its illuminating power is so decidedly superior to every other description of artificial light, that, long after it had secured its place as an almost indispensable article of consumption, it was treated by the people as if it possessed a fixed quantity of illuminating power, and, without any reference to any difference in the relative powers of different gases, the metropolitan companies, in all their struggles for public favour, maintained a competition for price alone.

"The increased application of chemical science to the objects of every-day life has led to a complete alteration of opinion in respect of gas; it is now judged of by its quality as well as its price, and means are provided to test the comparative value of gas, as of other articles of commerce and manufacture.

"Having regard to this fact, and being determined that the citizens should realise all the benefits which science could secure, the directors, before they entered into a contract with Mr. Croll to manufacture and supply them with gas at a fixed price, retained the services of two eminent chemists, Professor Graham and Dr. Leeson, and an experienced gas engineer, Mr. Clegg, to examine the gases furnished by other companies, and to fix a high standard for this company's gas as the basis of their contract with Mr. Croll.

"These gentlemen conducted their experiments in the usual manner, trying the illuminating power of the City and Chartered Gas Company's gases, by an argand burner of 16 holes, burning 5 cubic feet per hour, with a sperm candle burning 131·5 grains per hour. The average power of these gases, as shown by the photometer, was a little over 9 candles (after excluding one observation which, from accidental causes, was too low to be received in the calculation). Their report of the 22nd of October, 1849, concludes in the following words:—

"'We would consider an illuminating power equal to 9½ candles of our standard (131·5 sperm) as a high average for the gas supplied at present by the different companies to the City consumers; and would, therefore, suggest that it should be adopted by your company as the standard of comparison for the gas to be supplied by Mr. Croll.

(Signed) "'Thomas Graham, Professor of Chemistry.
"'W. Leeson, M.D.
"'Samuel Clegg, Gas Engineer.'

"The directors, thus advised by competent professional authority, entered into a contract with Mr. Croll to supply the company with gas of the standard recommended; and when the company's Act of Incorporation was prepared, they introduced a clause requiring them to supply the public with gas equal to 12 wax candles weighing 120 grains—a standard, as they were then advised, somewhat higher than that which, measured in sperm candles, they had been recommended to adopt.

"It is the peculiar characteristic of the times in which we live, that events of moment follow each other with so much rapidity as scarcely to leave their footprints uneffaced for even a few short years. The shareholders of this company, and the consumers of gas in London, can, however, have scarcely forgotten the excitement and consternation created amongst gas establishments throughout the empire by the formation of this company, and by the promulgation of principles which declared it to be our intention to carry out. As soon as it became evident that the establishment of our company was inevitable, in despite of all opposition, other companies raised their standard of quality, and they reduced their charge in the City 30 per cent., notwithstanding their previous declaration that it was impossible to furnish gas at the price. All the metropolitan companies, since our establishment, have likewise raised the illuminating power of the gas, and they have at the same time reduced their price generally to the level to which we had lowered it in the City. The large amount of popularity which this company had thus acquired raised it as soon as it commenced operations to an unexampled state of prosperity. Within six months from its commencement the number of consumers who had their services attached amounted to 4500, burning upwards of 39,850 lights. It was thus at once seen that, if we maintained our popularity not only would a 10 per cent. dividend to the shareholder be secured, but every probability was shown that in a short period a still further reduction of price might be made to the consumers in the manner contemplated in the prospectus of the company, based upon the calculations of Mr. Croll.

"It is with companies as with individuals. Prosperity, often deceitful, has always its trials and its perils, as well as adversity hath. Sustained by public confidence, the storms of opposition which had assailed this company in its infant state did but nerve its arm to overcome difficulties it had to surmount. It will not be surprising if, in the hour of its prosperity the fervour of public favour may have somewhat subsided, and, perhaps, after the months of anxious excitement through which the company had to pass, its vigilance may, to some extent, have been unconsciously relaxed; certain it is that, for some causes not yet fully explained, the attacks of envy and calumny—which, as surely as shadow waits on sunshine, are always ready to fasten upon meritorious success—produced some months since an impression unfavourable to this company, to which disappointment of our expectation of increased rental is principally to be ascribed.

"Amongst the circumstances that led to this result, the publication of certain handbills, by Messrs. Tallis, may undoubtedly be classed. This acknowledgment of the temporary success of their attacks may perhaps afford satisfaction to them, and to those by whom they were put in motion; but it is due to truth that the directors should make the admission, not doubting at the same time that, when the circumstances are explained and the pretexts exposed, like most other evil machinations, they will return to plague the inventors.

"In October, 1850, at a period when we were floating on the full tide of prosperity, Messrs. Tallis applied to have our gas laid on. Messrs. Tallis have an extensive concern as printers and publishers of cheap publications; their place of business is upon the boundary wall of the City, though not within it. As we then had our hands full of business with City consumers, we did not at that time desire to extend the operations of the comany beyond the City walls. The application was, however, repeated, the parties alleging that Messrs. Tallis required a very large supply in their trade for purposes of heat as well as light, and that they could not obtain a sufficient supply from the Chartered Company, with whom they then dealt. This board, not suspecting any unfair design, and believing Messrs. Tallis's statement to be true, agreed, after some importunity, to comply with their request. Our inspectors visited their premises; they found that Messrs. Tallis received the supply of which they complained from the Chartered by means of two 1¼-inch pipes, which were quite incapable of passing the supply which they represented they required; in consequence of which, our inspectors, acting upon their representations, put down one pipe three inches in diameter, which will pass, in the same time and under the same pressure, more than three times the quantity the two smaller pipes could convey.

"It is a remarkable fact that, shortly after this company had yielded to Messrs. Tallis's importunities, and had promised to supply them with gas, a negotiation was entered into by the Chartered Company and ourselves, by which, in order to arrest their opposition to our bill, we agreed to restrict our service to the City; as, however, we had promised Messrs. Tallis to accede to their wishes, we made it an honourable stipulation with the company that Messrs. Tallis's right to receive our gas should be reserved to them, provided the connection to our pipes was made immediately; and a gentleman from our board, who had claimed for Messrs. Tallis this reservation in their favour, undertook to wait upon them to communicate the fact.

"We repeat, that at the time we engaged to serve Messrs. Tallis, we credited their representations; although, as large consumers, we regarded them as good customers, we were moved to supply them at their solicitation and for their accommodation. Little did we think we were placing a shaft in our adversaries' quiver, which would afterwards be directed against ourselves. After the services were laid in, Messrs. Tallis's premises were occasionally visited by our officers, and no dissatisfaction or complaint was expressed until the day of reckoning came, and then only in terms just sufficient to avoid the immediate payment of our demand, and lay the foundation of a grievance, to be used, as it now appears, when it might suit their purpose or their pleasure to make an attack on the company. In answer to applications for payment of their gas rent, Messrs. Tallis insinuated that the meters did not register accurately, for no other reason than because the charge far exceeded the sum they had paid the Chartered Company for the corresponding quarter of the former year. Our officers reminded them that their supply had been at their own request greatly increased, and assured them of their belief that the charge was accurate; but, as this company did not choose to constitute themselves judges in their own cause, they proposed to allow any other meter to be put up at our own expense for the purpose of testing the correctness of the charge, and to be governed by the result. While these matters were under discussion, months and quarters rolled on, but without any payment being made; we offered to leave the amount of our claim to be settled by the engineer of either of the other metropolitan gas companies, who might test both the meter and the gas to enable them to determine what they ought to pay. Both these offers Messrs. Tallis declined, and it became manifest that it was a grievance they coveted, not a remedy.

"Shortly after our act had passed, namely, in the autumn of 1851, we heard rumours that the gas charged to some of our consumers exceeded in quantity the consumption of former years. Most of these complaints were preferred in a spirit and form which rendered them the subjects of legitimate inquiry, and, if necessary, of immediate and effectual redress. The directors instituted a searching investigation. In some of the cases inquired into, the cause of the increase was accounted for to the satisfaction of the parties making them; in other cases the complaints appeared to be well founded, and attributable to casual circumstances; and in other cases proper allowances were made. We are bound likewise to acknowledge that in some few other cases complaints of increased consumption were made for which we have been unable quite satisfactorily to account; but as in these cases the meters, on examination, were found to register truly, although the complainants were unprejudiced, and far too honourable to misrepresent a statement of facts, we did not consider ourselves at liberty to make deductions, confident that the increased quantity had been in fact supplied, and that its unaccounted-for consumption had been produced by causes equally beyond our knowledge and control. We have reason for believing, within the limits of the City, the gas-fitters have, since the reduction of price, fixed a number of burners more than 25 per cent., in

addition to the number previously in use. In many cases like Messrs. Tallis, the pipes and fittings of the consumers have been multiplied and enlarged, so as to pass a much greater quantity much more freely than was before the case. In such cases, honourable and reasonable men, when their attention has been called to these facts, have been contented to pay the increased charge to which a fuller and better supply naturally led.

"It is a recognised fact in commercial economics, that any reduction in the price of articles of daily use largely increases the consumption, and all our calculations have been based upon this fact. It is true that, since the price of the article has been lowered and its quality raised, a number of new consumers, both for trade and domestic purposes, have been added to our list. It is equally true that a number of those who, under the condition of high prices, used gas for only one purpose or in one place, now use it for many purposes and in many places where it was before a stranger. Gas for cooking, gas for heating baths, and keeping hot water ready at all hours by day and by night, are all now recognised uses of this important article of domestic economy, to which gas companies naturally look for an augmented supply to compensate them for the increased cost of improved quality, and for the diminished profit of a reduced price."

After some further circumstantial statements, the report proceeds:—

"Having thus detailed at, perhaps, too great a length the circumstances that have led to the temporary disfavour with which we have been thus undeservedly visited, we now proceed to the more agreeable task of narrating the proceedings we have adopted for the future government of the company, under the circumstances as they now exist.

"It is said to be lawful to learn lessons from our adversaries. Other companies have increased the illuminating power of their gas. It is our intention to do the same.

"We repeat that the gas supplied by us has been, in purity and illuminating power, at all times superior to the gas we engaged to supply, and to the gas which before the establishment of our company was in common use.

"In January last, Mr. Croll took upon himself, without instructions from us, to increase the illuminating power, so as to place his gas at a standard considerably above that which he was required to supply.

"We have called in the aid of Professor Graham and Dr. Leeson, and under their advice we have raised the standard candle used in measuring the power of the gas from 131·5 to 140 grains of sperm, and we have remodelled our contract with Mr. Croll, so as to obtain from him gas of that standard ranging between 12 and 16 candles.

"The contract price at present paid to Mr. Croll, 1s. 4¼d. for 9¼ candles, being at the rate of 1⅓d. per candle; we have now agreed to pay him an extra charge of ¼d. for every additional candle of illuminating power which we may require.

"To enable us to give the consumers gas of this superior description, at a charge of 4s. per 1000, it is necessary that our consumption should be increased to the amount which our former calculations assumed would be the amount required.

"Mr. Croll's confidence is so strong that this increased demand will be realised, that he has arranged with the board that he is to be paid monthly, as heretofore, for gas up to the 9¼ candles, and that he is to charge the company for the additional quantity of illuminating power which he may give, to be paid for only after the shareholders shall have been paid their stipulated dividend of 10 per cent.

"In raising the standard of our gas so far above that which is provided by our act and by our contract with Mr. Croll, we have not been impelled by a desire to enter into an expensive contest with the Chartered Gas Company, however unfairly we may think we have been treated by them. In December, 1849, when opposing us, they offered the Commissioners of Sewers to be bound by the same obligations for the public protection as we had agreed to take upon ourselves by our act. In order to economise expense, to serve and satisfy the public, and to secure equal advantages to all the companies, we, in February last, invited them to engage a room in the City, where the public officer appointed by the Corporation might test the gas for the three companies simultaneously, and at their joint expense. The Chartered Company rejected this offer. We annexed to our report a copy of the correspondence, from which will be seen that our proposals were honourable and candid. The reasons for the Chartered Company refusing their acceptance may be inferred from the fact, that within three days from the date of their letter a director of that company was engaged in distributing handbills which stigmatized our company as supplying bad gas, with which, however, they were unwilling their own should be compared."

The following is the balance-sheet:—

BALANCE SHEET, SEPT. 30, 1851.

Dr.	£ s. d.	£ s. d.	Cr.	£ s. d.	£ s. d.
To capital called up	150,000 0 0		By cash at bankers	4,333 13 3	
Less amount of calls remaining unpaid	2,033 13 6		In office	154 0 10	
		147,966 6 6			4,487 14 1
To creditors		21,823 1 10	By deposits with trustees of Whitechapel, Mile-end, and London Hospital		1,650 0 0
To creditors on bills payable		4,802 9 10	By debtors for gas, for the September quarter, arrears, &c.		10,873 14 4
To loan on deposit of shares	£7,500 0 0		By 750 shares on hand, taken back from Rigby's by agreement, and deposited with bankers as security for loan, per contra		7,500 0 0
Interest	22 18 4		By lands, works, plant, mains, services, meters, and stock	164,501 12 3	
	7,522 18 4		By amount paid A. A. Croll on engineering account (the ultimate treatment of which is contingent on the dividends to be paid by the company)	£5,538 0 0	
To loan on mortgage	25,000 0 0		By ditto ditto, new account	500 0 0	
Interest	308 4 2			6,038 0 0	
	25,308 4 2		By office furniture	630 1 4	
		32,831 2 6	By preliminary expenses, viz.:—		
To shareholders for dividends unclaimed at this date		53 7 0	Law and parliamentary charges	11,187 19 4	
To revenue account, for balance of that account to this date	12,304 10 5		Discount allowed for payments of calls in advance	373 15 1	
Less dividends declared	4,390 18 6		Printing	500 5 7	
		7,913 11 11	Stationery	693 16 10	
			Advertisements	309 0 2	
			Rent and taxes	390 16 1	
			Directors' allowance to Dec. 4, 1850	1,926 0 0	
			Auditors' ditto ditto	100 0 0	
			Secretary's salary ditto	100 0 0	
			A. A. Croll, for sundry expenses incurred in the formation of the company	4,127 4 6	
				19,708 17 7	
		190,878 11 2			
		£315,389 19 7			£315,389 19 7

Examined and found correct, April 26, 1852.

G. C. BEGBIE, 10, Coleman-street,
HENRY CHATTERIS, 29, Gresham-street,
} Auditors appointed by the Corporation of the City of London.

REVENUE ACCOUNT, FROM SEPT. 29, 1850, TO SEPT. 30, 1851.

Dr.	£ s. d.	£ s. d.	Cr.	£ s. d.
To cost of gas purchased for the year ending September 30, 1851		15,432 10 1	By gas supplied to consumers, for the year ending September 30, 1851	33,358 13 5
To repairs of services, wages, &c.	1,233 9 5			
To charges	1,788 5 6			
To rent and taxes	757 1 0			
To stationery	231 14 2			
To printing	209 15 0			
To interest and discount	385 0 4			
To bad debts, from parties having left in arrear	154 17 6			
To directors' allowance, from December 4 to this date	824 0 0			
To auditors' allowance, ditto	37 10 0			
		5,621 12 11		
		21,054 3 0		
To balance, being net profit carried down		12,304 10 5		
		£33,358 13 5		£33,358 13 5
To dividends declared		4,390 18 6	By balance, being net profit brought down	12,304 10 5
To balance carried down		7,913 11 11		
		£12,304 10 5	By balance brought down	£7,913 11 11

Examined and found correct April 26, 1852.

G. C. BEGBIE, 10, Coleman-street,
HENRY CHATTERIS, 29, Gresham-street,
} Auditors appointed by the Corporation of the City of London.

BALANCE SHEET, MARCH 31, 1852. (*Not audited.*)

Cr.	£	s.	d.	£	s.	d.
By cash in bankers' hands	5,869	8	10			
By ,, office	150	5	10			
				6,019	14	8
By gas rents for March quarter, arrears, &c.				18,521	17	4
By lands, works, plant, mains, services, meters, and stock	175,188	9	11			
By payments on account of works in progress	1,947	10	0			
By A. A. Croll, for engineering (the ultimate treatment of which is contingent on the dividends to be paid by the company)	2,769	0	0			
By A. A Croll, engineering (for new works)	2,000	0	0			
By office fixtures and furniture	630	1	4			
By preliminary expenses	19,930	7	9			
				202,465	9	0
				£227,007	1	0

Dr.	£	s.	d.
To capital called up	150,000	0	0
To creditors on debentures	47,600	0	0
To liabilities	10,730	10	0
To creditors on bills payable	5,770	10	5
To dividends unclaimed to this date	109	19	1
To revenue account, as per balance from that account	12,796	1	6
	£227,007	1	0

28, Coleman-street, April 28, 1852.

By order of the Board, R. M. MASSEY, Secretary.

REVENUE ACCOUNT, FROM SEPTEMBER 30, 1851, TO MARCH 31, 1852. (*Not audited.*)

Dr.	£	s.	d.	£	s.	d.
To dividend declared for the half-year ending Sept. 30, 1851				5,779	19	11
To cost of gas purchased for the half-year ending Mar. 31, 1852				14,573	7	3
To interest on mortgage	£420	5	1			
To interest on debentures to March 31, 1852	347	8	3			
				767	13	4
To income tax on dividends declared to Sept. 30, 1851				296	12	9
To cleaning and repairing Smithfield public lamps, 1 year				17	8	9
To directors	£500	0	0			
To auditors	52	10	0			
To chemical referee	65	12	6			
To salaries	860	11	0			
To trade charges	590	3	7			
To stationery and advertisements	184	19	6			
To wages	497	14	1			
To rates and taxes	598	7	1			
To bad debts and allowances	312	14	10			
				3,662	12	7
				4,744	7	5
				25,097	14	7
To balance being net profit, carried down				12,796	1	6
				£37,893	16	1

Cr.	£	s.	d.
By amount of balance available for dividend as per official auditors' statement of accounts, from formation of the company	7,913	11	11
By gas supplied to consumers and public lights, for the half-year ending March 31, 1852	29,980	4	2
	£37,893	16	1

By balance brought down, being the amount available for dividend.. £12,796 1 6

28, Coleman-street, April 28, 1852.

By order of the Board, R. M. MASSEY, Secretary.

The CHAIRMAN said that he must repeat again the apology of the directors, not for themselves, but for the host of that house, because he had not kept faith with them by giving them the room which they had been accustomed to meet in; and the consequence was, that very many gentlemen had suffered great inconvenience, and they (the directors) had also suffered great inconvenience. (A voice, "Don't come again.") He thought they must try the Albion next year. (Hear, hear.) As they had only imperfectly heard the report which had been read, perhaps, if they adopted it, they would move that it be printed; it was a document upon which the directors had bestowed a great deal of attention. Although they could but imperfectly have heard the report, yet he thought that the salient points had been effectually caught by the shareholders present. First, there was the point that the dividend of the company would be for the present half-year 10 per cent., and likewise they were to pay 2½ per cent., which would make for the two last half years 7½ per cent., and for the present half year 10 per cent.; and they had prudently left in hand upwards of £3000 to assist the dividend of the two next summer quarters, and meet any contingencies that might arise. (Hear, hear.) As to their prophecy last year, he had ventured to assume that the two past quarters would yield a rental of £40,000; they had yielded only £30,000. They had carefully gone into the consideration of that question in their reports, because they thought it better to open the weak points of their case; for they must mainly depend upon the gentlemen present to further and promote the interests and objects of the company. (Hear.) It was fair to say that there had been some disturbing causes besides those alluded to in the report; the early-closing movement, for instance—which had been so much pushed in the City, and which had struck out one hour or something more than that from the time of burning gas in shops—had, to some extent, interfered with their increasing the quantity supplied by the company. He had no doubt that those scurrilous handbills of Messrs. Tallis and Co., as unfounded as they were unjust, had acted, to a very great extent, to their prejudice; but, as they had put that matter in a train for investigation by the proper legal tribunals, they had not thought fit to enter into a "war of words" upon the matter. In former times they were not backward in sending out publications; but now they could refer to their acts, and they would recommend them to the citizens of London. Another matter to which he wished to refer was, the question of the capital account. In the report of the directors, issued at the last half-yearly meeting, they estimated it at £200,806, including a mortgage then incurred to do those extensive works which were then thought necessary. The fact was that, in making up their account to the present time, the capital was represented as £202,465. He thought that, considering the large nature of those works, and that the construction of them was not an every-day occurrence, the shareholders would not withhold their sanction and approbation from the directors and their able engineer. As to the extent to which they had finished their works, they had now works capable of doing 50 per cent. more work than they could get to do; but when they considered that they were charged with the entire of the public lighting of the City, and with a large proportion of the private lighting, they thought it their duty to err on the right side, and to have their works in perfect efficiency, so as to meet every contingency to which they might be liable to be called, in the hope that they would have the support of the shareholders. (Hear, hear.) Another matter which he was anxious to mention was, that they had perfected the arrangement that was instituted at the last meeting, and which the directors were authorised to carry through—that was the appointment of an independent inspector by the City of London. He saw some members of the Corporation in the room, and they would bear testimony that no exertions of his were wanting to get the appointment of that officer made; for he felt that their business was so conducted, that whether inspectors were to be appointed to test their meters, or the chemists their gas, his contest was that they should be employed at once; for they felt that they had nothing to hide, and that, if they had any weak point, the sooner it was pointed out the better for them all. Proper auditors had also been appointed, and they had given in a balance-sheet according to the terms of the deed. From this account it appeared that, instead of distributing more than they had a right to do, they had fallen short of it by £1100; so that, whether they looked to the revenue account or the capital account, if they required vouching, they had it in the statements of the public officers appointed by the City of London. As to the chemist, he had a *carte blanche* to act fully to carry out the duties of his office; and he has lately completed a large laboratory in their own house, which had now his own name ("Dr. Letheby's Laboratory") upon it; and he was sure that he would keep them to their bargain with the public, and would probably carry on some general investigations as to the nature and quality of gas as well. (Hear, hear.) As to the tester of meters, he had ordered from Mr. Parkinson (a most eminent man in the trade) an apparatus which had been properly tested at the Office of Weights and Measures, and all the meter makers in the metropolis had been invited to see that it was fair; and now, if there was any fault which was allowed to exist, it was the consumers' own fault, for they should send any complaint to the office and have it reported on at once. He thought the directors had carried out what they had said they would do. (Hear, hear.) As to the act of arrangement with the City of London Gas Company, they were all aware that they were under a deed, as authorised by the shareholders, to enter into an amalgamation with that company on certain defined principles that were laid down:—1st, that the capital of the united companies should not exceed £400,000; and 2ndly, that the plant of each company should be valued, not at what it cost, but at what it was worth, having regard to the construction of the present time, and that in the mean time the companies should carry on their business without rivalry. Up to that time they had carried out that arrangement. A joint committee had been appointed, and they had discussed from time to time as to their proceedings; and they had agreed upon the terms of a bill, and which bill had been read a first and second time, and would have been in a committee of the House in the present month; but the committee thought it a very doubtful question, having regard to the state of political parties, whether, during the present session, the bill could be passed in time to get up to the House of Lords before Parliament should be dissolved. In fact, they thought it so doubtful that, with the mutual consent of the representatives of both companies, they postponed the Act of Amalgamation until next year, and a deed had been prepared, which left them to remain in the same position next year as they were in this year. This proposal was by no means distasteful to them; for they knew that the shareholders would have their dividends in the regular form, and they felt likewise not unwilling to proceed in carrying out the arrangements of their company for another year, as they felt rather proud to demonstrate the truth of the principles upon which the company was founded. (Hear, hear.) It had been doubted whether the principles upon which their works had been constructed, and the company founded, were correct; and, in truth, they were departing from the acknowledged principles. The question was, whether the principles upon which they acted were, as they in their ignorance believed them to be, sound; and it was their opinion that those principles and their importance would not only

be demonstrated by their experience, but that they would acquire a more certain value. These were the motives that led them to agree to the postponement of the bill. Before he passed on to another matter to which he wished to call their attention, he was reminded to say something with regard to the auditors' report to them. He (the Chairman) had been in constant communication with those gentlemen; for he stated that, when they had any difficulty or wished for any explanation, the whole of the books of the company were open, and they were ready to give them any information. Of this they had largely availed themselves, and they had gone through a prolonged investigation of the accounts of the company. A very short time was sufficient to show the integrity of their accounts; but they heard with great regret that their chief accountant had not kept their accounts in a state in which accountants desired to see them: they were kept by double entry, and the result of them was correct, but it was not arrived at in a manner which the creditors liked. Under these circumstances the directors desired the auditors to restate the accounts, and they had done so; but he regretted to say that, as to their accountant, they had been obliged to displace him and to place the matter in other hands. They must clearly understand that the accounts were substantially right, but professionally they had been wrongly kept. The next matter to which he wished to call their attention was the alteration of their contract with Mr. Croll. His original contract was to supply them with gas of the illuminating power of 9¼ candles, the common standard being at that time 9 candles. The effect, however, of competition had been to raise this standard of the old companies, and it was necessary for the directors of the Great Central to raise the standard of their gas, and keep it, as it had hitherto been, above the average standard of all the gas companies of the metropolis. They were, as he had stated, bound by their contract with Mr. Croll to supply them with gas of 9¼ candles only; and, therefore, they had had a long arrrangement pending upon this matter, and Mr. Croll had with considerable spirit tendered to the company that he would raise the standard to 16 candles at once, asking in the first instance only for his present price for the 9¼-candle gas, and depending for the difference of price between that and 16-candle gas until the company should pay £10 per cent.; and until then he asked for no further charge. (Hear, hear.) They could not object to such an offer as that. The board had taken up with very great care the question of the standard by which they should be guided; for they had found that it so varied with different circumstances that the question, "What is a candle?" was more difficult than Sir Robert Peel's celebrated question of "What is a pound?"—the candles varying in their consumption from 120 to 130 or 140 grains per hour. They had determined to refer it to Professors Graham, Brande, and Cooper, and Dr. Leeson, to settle the standard for them, and the circumstances under which that standard of illumination should be taken. Having communicated these important matters to them, we thought that, whether they had regard to the state of the funds or the prospects of the company, there was abundant reason for the directors being complacent, and the shareholders good-humoured. (Hear, hear.) He had desired to have an account of the position in which they found themselves with reference to the consumers, which would show that they had not, as had been represented, been going back, although they had not been increasing as fast as had been expected. The number of burners which they supplied in October, 1851, was 46,456, and the increase was between October 23 and October 29, 231; for November, 397; December, 619; January, 1852, 276; February, 272; March, 244: making the total increase since the last report, 2139. (Hear, hear.) He should be very happy to answer any questions that might be put to him; and he would now conclude by moving, "That the report of the directors now read be received, adopted, and printed, and that their proceedings be approved and confirmed, and that the accounts down till March last, as circulated among the proprietors, be passed."

Alderman WIRE seconded the proposition.

Mr. LEVEY, of the firm of Robson and Levey, of Great New-street, Fetter-lane, said he had heard all that had been stated on the subject of Messrs. Tallis's experience; and, although he did not wish to justify anything that Messrs. Tallis had done, yet he was sorry to say that their experience bore out all Messrs. Tallis's complaints. This firm had been charged for 1851 double what they had paid to the old company, without an increase of light that would justify an increase of five per cent. in the amount of charge. He was sorry to say that their experience during the last quarter fully confirmed all their experience before; and during the last six weeks they had closed their business at six o'clock, yet their meter seemed to be going on registering gas as before. ("Hear, hear," laughter, and uproar.) He had gone with a great deal of care through their accounts for many preceding years, and he found that the amount did not vary 30s., whilst during 1851 it had exceeded the average by £40. What was the explanation he could not say; but he could only say that they could not go on being customers of the company under such circumstances. He held it to be very unfortunate that the company was not the maker of its own gas, instead of that business being in the hands of a gentleman whose interest was in direct opposition to that of the company. It was only right that these facts should be stated to them, for the results were unaccountable. The effect was that, in order to get from their burners the same amount of light in the year 1851 as they had had for 1850, they were charged double the amount. The fact was unanswerable, whatever might be the explanation. He should even have hesitated to speak upon the matter if their case was a solitary one; but there was Mr. Bone, the bookbinder, of Fleet-street, who had directed the company to cut off their gas from his premises. Mr. Palmer, of Crane-court, again was in the same position; for he told him that his consumption of gas, as registered, had much increased since he had been connected with the new company. It appeared to him that it would be a very just thing to let them hold back a portion of the money until all their customers were entirely satisfied.

The CHAIRMAN inquired what meter Mr. Levey had?

Mr. LEVEY said that, when first his firm was connected with the new company, their old meter was superseded by Croll and Glover's dry meter. At Christmas last the company offered to restore their old meter, and that had been in operation since Christmas last; but the result was precisely the same.

The CHAIRMAN said the directors stated in their report that there were cases in which there were evils to be remedied, and Mr. Levey's seemed to be one which they could not explain; but they were taking every step in their power to explain such cases. They had now a public officer appointed, and he (the chairman) hoped Mr. Levey would take care to have his meter tested by that gentleman. There were however, cases contrary to that of Mr. Levey. For instance, there was the case of Messrs. Moses and Son, of Aldgate, who were very large consumers; and their consumption was much less than it was when they were connected with the City Company. He referred to this case in contradistinction to Mr. Levey's, to show that there was nothing in the gas to cause that of which Mr. Levey complained; for, if that were so, the effect would be the same throughout all cases.

Mr. LEVEY did not wish to argue his case as a complaint, but only to state the fact.

Mr. THWAITES apprehended that almost every shareholder would find, as he had found, that his servants were in the habit of reasoning with themselves, and saying that a warm atmosphere was more congenial than a cold one, and they had lighted a dozen burners, not to give light, but to give heat; and they had done it under the impression that, as gas was reduced in price, they might with more liberty burn that gas. He had heard all sorts of things said of this association—he had heard it said that they had been burning air instead of gas—but it was quite clear that they could not supply two different kinds of articles—one to the Corporation of London, and another to their friend in Fetter-lane. But, however, the gentleman from Fetter-lane, who complained, had now the opportunity and advantage of applying to the proper person to inspect his meter, and say if there was anything wrong.

Mr. PEARSE said he had much to say, and he wished Mr. Thwaites would be as short as he could.

Mr. THWAITES said he would not detain them further than to say that any person who was dissatisfied with the measurement of the gas, or the quality of the light, he (Mr. Thwaites) would go with him himself, as a friend of truth and justice, and see that he was placed in a proper position as to light and measurement.

Mr. FRANKLYN remarked, that he had heard all that was said by Mr. Levey and the other gentlemen; and he must be excused for saying that the impression of a number of persons in the room, besides himself, was that of dissatisfaction. It was not to be laid down that every gas consumer was to go and test his own meter. They distinctly asserted, and their books might be seen, that their accounts of the same quantity of gas supplied by the old company amounted to barely one-half of those of the new company. If what had been stated was true, that their standard of illumination was higher than others, and had been increased, he did not understand how it was that his charge for the same amount of light had so much increased, nor how it could be explained away.

The CHAIRMAN: Are you speaking of the same case that has been mentioned before.

Mr. FRANKLYN: Yes. He was in the same house. As to what had been said about consulting the proper officers, their own officers had confessed by word of mouth that they could not understand the matter, and that there was decidedly something wrong. This being admitted, let them confine themselves to facts and remedies, and, whatever was to be said, let imaginary cases and all special pleading be left out from their speeches. It was not for the success of the company that any portion of the shareholders or consumers should be dissatisfied, and he had no wish, on his own part, to get up a grievance.

A SHAREHOLDER asked Mr. Franklyn whether he had applied at all to the inspector supplied by the Corporation?

Mr. FRANKLYN said they had gone the length of saying that all means had been tried, and they begged to be allowed to break their contract unless the company could remedy the evil of which they complained. He should suppose that the board would, under these circumstances, send the proper officer.

The CHAIRMAN stated that the case of Messrs. Levey and Robson was under the consideration of the directors, and one of the first cases that would be taken into consideration would be that which had just been stated.

Another SHAREHOLDER said that he found his consumption nearly equal in amount what he paid when gas was 6s. per 1000; it was not a solitary case, nor was it possible that such things could be avoided. The only way of making gas was to make as much as they thought would be sufficient for the time; but the present and the proper way was to make as much as they could, and let the consumers take as much as they wanted, and, if they took more than they were in the habit of taking, they must pay for it. The instances they had heard were not of a kind which applied to this company alone, but it was the same with all companies. He was not a consumer of this company, nor of any other of the City companies; but he was a shareholder in this company and in two others, and there were complaints there precisely the same as here.

Mr. FRANKLYN suggested whether it would not be necessary to prove that they had had before too little gas, and that they had now an abundant supply. It could hardly be inferred that this was so in some cases which had been mentioned, for Fleet-street was very near to the City of London Gas Works, and was at the extreme end of the Great Central Company's pipes. There would, of course, be greater pressure in the first than in the last case.

The CHAIRMAN assured the gentlemen that the directors would give their cases every attention. A gentleman who was a director in the City had told him that his firm was now paying more for gas at 4s. per 1000 than they had done when it was 6s. per 1000. There were

Messrs. Pawsons, who had had some experiments made with the meters, as the gentleman who had spoken had done, and the result was in favour of their company.

Mr. Pearse then rose, as a shareholder, to make some observations; but he was greeted with considerable noise and uproar, and an inquiry whether he was "the celebrated Pearse."

The Chairman asked for Mr. Pearse a fair hearing. He was well acquainted with gas, and his opinion, as far as that went, was worth something; but the truth was that they were all biassed to the side on which their interest lay, and Mr. Pearse was a shareholder in the Chartered Company to the amount of £5000, and he held in the Great Central one share of £10 value.

Mr. Pearse began again to address the meeting. A great authority had said, "Prove all things, hold fast that which is good;" and he (Mr. Pearse) was a man of truth and verity and fact. There were reporters there who would take down his words, and if he should state anything that was not truth, they could bring him to book at a future meeting. He had been a shareholder in this company one year, and he attended a meeting in that place on the 1st of April last year, and he was then refused admission by the chairman.

The Chairman: No, by the meeting. (Uproar and cries of "The meeting, not the chairman.")

The Chairman said he had not refused admission to Mr. Pearse, but the meeting had refused to hear him. He (the chairman) appealed to the shareholders whether they would hear Mr. Pearse; and they voted that he was neither useful nor ornamental. (Laughter and noise. A Voice: "Turn him out!" And cries of "Silence!")

The Chairman again requested a hearing for Mr. Pearse. (A Voice: "The first word he spoke was not the truth." Another Voice: "If you do not like your investment, I will give you £3 profit upon your share.")

Mr. Pearse: The first thing he would say was, that he doubted the accounts of this company; and he was a man of practice and experience, and if they gave him a plot of ground he could construct works from the very foundation. ("Question, question;" "Shut up;" "Sit down;" and cries of "Shove the candle down his throat!")

The Chairman said, Mr. Pearse appealed to him to get him a hearing. As long as what he had to say was *apropos* to the business which they were assembled there for, they ought to hear him. (No, no. Time, time. We don't want to hear him. Ten words are enough: he has only got one £10 share.)

Mr. Pearse again rose: He had an account of the company unaudited, which had been sent to him that morning, signed by Mr. Massey.

The Chairman: The report stated that the auditors had been appointed by virtue of the act of Parliament for a year, and they had no authority to go into accounts which extended beyond that period.

Mr. Pearse produced a paper containing certain remarks which he had drawn up, and he challenged contradiction to its truth. (Uproar. "You told a lie the first thing.") Mr. Pearse endeavoured to read his written remarks, and he continued apparently reading for some time; but not a word could we hear in consequence of the noise and uproar that prevailed.

The Chairman at length appealed to Mr. Pearse to sit down, if his object was not to create a disturbance. The meeting did not want to hear a long paper read.

A Voice: We won't hear him at any price.

Another Shareholder attempted to address the meeting, but

The Chairman, however, said they had had the accounts sent to them to give them time for deliberate consideration; and he would, therefore, now put the motion which had been moved and seconded to a show of hands.

The motion was carried amidst confusion.

Mr. Thomas Hall immediately mounted upon a chair, and commenced a speech, with the view of seconding the resolution; but he found, amidst laughter, that it had been carried.

The Chairman then put the next resolution:—

"That a dividend be now declared at the rate of 10 per cent. per annum for the half-year ending March 31, and likewise a further dividend of 2½ per cent. on the half-year ending Sept. 30 last, payable on June 1 next."

Mr. Pearse: It's only six per cent. out of profit. (Uproar.)

Mr. Thwaites said, Mr. Pearse had always been an interruption in meetings, and he had been obliged himself to give him into the charge of a policeman, and to walk him out of a public meeting. (Confusion.)

Mr. Pearse (in an excited manner): I tell you, sir, you are a liar. (Uproar, and cries of "Turn him out.")

Mr. Thwaites (after considerable interruption) said he had great pleasure in moving the resolution.

Mr. Rowe seconded it. He hoped that they would not in future turn half-yearly courts into courts of grievance for the consideration of matters that might be brought forward elsewhere. Mr. Pearse would not find this a foundling hospital where his grievances would be received.

Mr. Pearse got up and attempted to say something, but the uproar was so great that not a word could be heard.

The resolution was carried.

Mr. Charles Pearson said he had to propose to them a resolution which he was in favour of at former meetings, but which he could propose now with more satisfaction than on previous occasions. When he, in discharge of what he thought his duty to the citizens of London, brought this company forward, his experience led him to know that, unless there were a suitable appointment of officers to stand between the company and the consumers, it was impossible to say that there would be satisfaction. It had been said that the buyer and the seller were natural enemies, and his wish was that this company should be as numerous in shareholders as in consumers; but it could not be so. The company was resisted by the Chartered Company, and by others, and then their friends stepped forward and took 1000 shares, and, if they had not done so, they would not have been able to carry on the company. At the time when it was necessary that £70,000 should be paid down before they could lay down a single pipe, they were £20,000 short of it; and then their directors drew on their private funds, and took the shares and paid the money. They had had difficulties to encounter. They had had the difficulty of adversity, and now they had the difficulty of success; for there was a very natural tendency in the human mind to find fault with prosperous concerns, and he was not surprised that there were many envious persons who now wished to carry out, in reference to this company, their predictions of failure. The directors had a right to complain when they were charged with neglecting their duty in not listening to complaints. The directors had upon their table a list of every person who had made a complaint during the time between that and the preceding meeting. It was a chapter of grievances, or a book of complaints; and they examined all the cases. There had no doubt been many serious complaints against the manner in which their business had been conducted; but that was a circumstance which extended itself to all gas companies. Every heart knew its own bitterness, and every company knew its own complaints; but he knew that complaints against this company were not so numerous as against other companies, although the old companies were not a target to be shot at. The proposition which he had the honour to make to them was, "That the sum of £1000 be paid to the directors for their services from the 1st of January, 1851, to the 1st of January, 1852, to be divided in such manner and in such proportions as they shall think fit." Up to last year the directors were not remunerated at all; for they made it a principle that they would not ask for remuneration until all the shareholders were remunerated. It would require an increased consumption of 60,000,000 feet to enable Mr. Croll to receive the remuneration for the improved quality of the article which he intended to supply; but Mr. Croll was a bold man and a brave man, and he deserved success. He (Mr. Pearson) really would not yield to Mr. Pearse, who was putting on his most winning smiles. He knew what he wanted: it was to second the resolution; but he could not allow him to do so. (Laughter.)

The resolution was then seconded, and carried.

Mr. Blake moved, and Mr. Watson seconded, the resolution, "That Thomas Dakin, Thomas Gabriel, John Bradbury, Francis Bennock, G. H. Bovill, Frank Clemow, W. F. A. Delane, John Lowe, T. W. Massey, George Virtue, James Warren, and James Wyld, Esqrs., the directors who retire in conformity with the 83rd section of the Companies' Clauses Act, be, and they are hereby elected, directors of this company."

The resolution was carried.

Upon the motion of Alderman Wire, seconded by Mr. Webber, it was resolved, "That the thanks of this meeting be offered to the chairman and directors, for the able manner in which they have conducted the affairs of this company."

The Chairman, in returning thanks, said that the kindness of the shareholders would be the best incentive to their future exertions.

A Voice: "I move that Mr. Pearse take the chair on future occasions." (Laughter.)

Mr. Pearse has handed us a copy of the questions put by him to the chairman, and which in the confusion were inaudible to our reporter; they were to the following effect:—

1. Is it true that Mr. Croll has demanded 4d. per 1000 feet extra (being, say 20 per cent. increase) on the gas supplied, in consequence of the directors requiring it to be of the standard illuminating power of 12 candles to five cubic feet of gas, commonly called twelve-candle gas instead of nine-candle gas, which he states is what he contracted for?

2. What was the object of Mr. Webber's petition against the Amalgamation Bill?

3. What was the object of Mr. Croll's petition against the same?

4. Why was the Amalgamation Bill withdrawn?

5. Is it intended to proceed with it next session?

6. In what state is the arbitration between the Great Central Gas Consumers' Company and the City of London Gas Company, as to the value of the respective works? Have the arbitrators met on the subject?

7. Has Mr. Croll made any claim for an advance on his contract price of 1s. 9d. per 1000 feet of gas as registered by the consumers' meters?

8. What allowances have been made to consumers for overcharges in quantity of gas consumed?

9. How was the supply of the *Daily News* printing-office lost?

10. How many meters have been sent in for adjustment? and is any report of the meter inspector to be laid before the meeting?

11. Has Dr. Letheby made any report on the quality of the gas? and if he has, will it be laid before the meeting?

12. No charge is made against revenue account for law expenses. Have no law expenses been incurred during the half year? and how is it intended to dispose of the item of £11,187. 19s. 4d., in the balance-sheet, at the debit of law and parliamentary charges? and how is it intended to dispose of the item of £1926 for directors' allowances to December 4, 1850, and the other items, amounting together to £19,708. 19s. 7d.?

13. Is there no wear and tear for the half year, as I find none in account, except repairs of services and wages?

THE GAS QUESTION IN ST. MARYLEBONE.

At a meeting of the Vestry of St. Marylebone, held at the Court-house, on the 10th ult.,

Alfred Daniell, Esq., in the chair,

Mr. M'Dowall and Mr. Smith (the latter gentleman late one of the promoters of the Marylebone Gas Consumers' Company) waited upon the vestry for the purpose of presenting the following memorial on the subject of the supply of gas to the parish of Marylebone:—

"To the honourable the vestry of St. Marylebone.

"April 10, 1852.

"Gentlemen,—Having on several occasions, by permission of your

honourable board, been allowed to call your attention to the necessity of a competition in the article of gas throughout the whole of this important parish—and having brought prominently before your notice, as we fully believed, the just claims of the Marylebone Gas Consumers' Company, according to their pledges, believing them to be strictly true—we now find that we have been too confiding. There appears to have been a great want of foresight, judgment, and perseverance on the part of the originators of this company, to the serious disappointment of a large number of the inhabitants of this parish, who are still anxious that a fair and honourable competition may be obtained, should your honourable board grant permission to test the merits of a superior gas, now capable of being introduced, and in every respect superior to coal gas, yet not higher in price.

"Your memorialists would, therefore, respectfully request, for the satisfaction of your honourable board and the ratepayers at large, that some part of the courthouse may be granted to fully test the merits of the gas alluded to, which would be done without inconvenience or expense to the parish.

"We would feel obliged by your honourable board granting permission to make some remarks upon the matters contained in this communication."

The CHAIRMAN: Have you anything to add to the memorial?

Mr. M'DOWALL said he should like to make some observations, as he wished to bring before the vestry a new kind of gas. He must apologize for having attended on so many occasions before the vestry on the subject of the supply of gas to this parish. His only object in doing so was to put himself and his fellow-consumers in a better position. He was in hopes that they should have had the advantage of competition from the Marylebone Gas Consumers' Company; but he now regretted to say that the conduct of that company, or those who had the direction of it, had been such, that he now very much feared that the gas consumers and the great body of the parishioners would find that, so far as that company was concerned, competition in gas was hopeless. He considered that himself and other consumers had great grounds of complaint against the concoctors of the Marylebone Gas Consumers' Company; for, although their operations had been retarded by certain statements which had gone round the parish, still they had not come forward in that manner which was at all calculated to enlist confidence amongst the gas consumers. He (Mr. M'Dowall) could not forget the support which the Marylebone Gas Consumers' Company had received from the vestry. When they made an application to lay down their mains, the request was unanimously granted. No gas company had ever previously had the advantages which the Marylebone Gas Consumers' Company had offered to it, in the unanimous support of the vestry of Marylebone, which had attempted to come into that parish. If those who were at the head of that company had acted in an energetic and bonâ fide manner and with proper intentions, there could have been no doubt of their success. The vestry would remember that the solicitor of the company gave a distinct promise that they would be prepared to go on; and notwithstanding that promise, and that five or six weeks had elapsed, he would ask, where was the company? (Hear, hear.) It was now necessary that the truth should come out; and it must be confessed that there has been a great misunderstanding, and that the gas consumers of Marylebone had been completely deceived. The promoters of the Marylebone Gas Consumers' Company had completely broken faith with the consumers of Marylebone, as at the public meetings pledges had been given that the company would be prepared to go on in the month of March. (Hear.) Another pledge given by the solicitor to the company was, that the direction should not only be increased, but that it should be increased by bringing into the direction some Marylebone men of honourable character who were well known. Another pledge which was given was, that no engineer should be engaged who was, or who ever had been, connected with any London gas company. And yet, in defiance of these pledges, no addition had been made in the direction, nor had any gentleman joined it who was locally connected, or in whom the parishioners of Marylebone had confidence. They had also employed and thrust upon Marylebone an engineer who had been discharged from another gas company on the other side of the water, which was founded on the same principles which the Marylebone Gas Consumers' Company was professed to be founded upon. With these facts before them, the gas consumers of Marylebone had altogether lost confidence in the Gas Consumers' Company; but there was no diminution in the feeling of the consumers for gas competition. He (Mr. M'Dowall) had, time after time, waited on the promoters and urged them to advance, and assured them that, unless they put the names of some honourable Marylebone men in the direction, the company would sink. He had canvassed the feelings of the consumers, and he found that they were still more alive than ever to the necessity of competition, as the Imperial Company, feeling that they were, to a certain extent, free, were becoming more arbitrary than ever. He was there for the purpose of appealing to the vestry in behalf of a large body of consumers, who had had a gas presented to their notice which, he had no doubt whatever, would entirely supersede the ordinary gas now in use. It was produced from vegetable oil, and was the invention (as our reporter understood) of a Mr. Booth, who had patented it; and it was in operation at Blackpool, and at the Harrow and some other stations of the London and North-Western Railway. They were of opinion that this gas might be made available for the purposes of this parish, at an expense less than at present, because of its superior illuminating power; and what they had to ask was, that the vestry would, without incurring any expense, give them the opportunity of testing only one light in the boardroom of that parish. It was produced from vegetable oil, and its purity was very superior to coal gas of any description. They were induced to ask this, as the gas consumers were still most desirous for competition; and they had been so often deceived by projected gas companies. It was of that character that any gentleman could make his own gas with kid gloves on without soiling them. Again, there would be no necessity for having the parish injured by building large gasometers and smoky gas houses. The proposal was to divide Marylebone into ten districts; and then in each district any common back yard would suffice for the manufacture of sufficient gas for each district. Thus there would be no necessity to carry out the local act, that gas works should not be built within 500 yards of the parish of Marylebone. So far from there being any offensive effluvia from this vegetable gas, there was none whatever, and the smoke would consume itself. Again, if the parish were divided into the ten districts as proposed, the only mains required would be the smallest mains used; and, therefore, the streets would not be required to be broken up to any great extent, and the price would be even less than was now paid for the present gas. That competition was wanted more than ever was evident, from the fact that the Imperial Company, seeing that the projected competition from the Marylebone Gas Consumers' Company had failed, were now becoming more arbitrary than ever, and making attempts to crush all those who had taken any part in the late gas movement in favour of competition. During the last quarter he (Mr. M'Dowall) had burned his gas one hour more in the morning, and they had put on as much for it as they usually charged for four hours in the afternoon; and, when he appealed against it to the Imperial Company's board, all the redress he got was the reply, that they only wished they could not do a little more for him. (Laughter.) He (Mr. M'Dowall) was not alone in this treatment. He knew many, who had taken part and signed contracts with the new company, who had been marked in the same way; and, now the gas agitation was more at rest, the Imperial Company were taking advantage of the circumstance, and the gas consumers were now being more oppressed than ever. They were, therefore, still desirous of competition; and, finding that the Gas Consumers' Company had failed in realizing their expectations, they now appealed to the vestry to aid them. This vegetable gas he had seen, and it was fit for any nobleman or gentleman's house; and all they wanted was, that the vestry would give them the opportunity of testing it in this courthouse, and enable the consumers to come and see it. I shall be happy to answer any questions.

Mr. DAWES: Do I understand you to say that this is an oil gas?

Mr. M'DOWALL: Yes; a vegetable oil gas.

Mr. HODGES: Where did you say it was in operation?

Mr. M'DOWALL: At Blackpool and at the Harrow railway station.

Mr. GROTE: Pray, is this the same gas as that advertised as superior to coals for drawing-room fires?

Mr. M'DOWALL: No; that is the project of a gentleman in the St. John's-wood-road; but I am informed that the purity and the power of this gas is vastly superior to that of any coal gas which can be produced in England.

Dr. RUSSELL: Are you aware what amount of gas can be produced from one ton of this vegetable oil you speak of?

Mr. M'DOWALL: No, I cannot. The oil is sold at 1s. per gallon; and, after 13 years, the patent will be out, and it will become the right of the public.

Dr. SAYER: From what sort of vegetable is this oil produced?

Mr. M'DOWALL: It is stated to be oil extracted from the banana leaf.*

Dr. SAYER: Do they give the oil any name?

Mr. M'DOWALL: I am not aware of that, except that it is said to be banana-leaf oil.

Dr. RUSSELL: We know that 10,000 feet of gas is the usual product of a ton of coals; but how much gas per ton this oil would produce it appears we cannot get at?

Mr. M'DOWALL: I am not able to tell that; what I am here to ask is, that the vestry should try it—should test it for themselves; they would then be able to judge of its merits.

Mr. LEWIS: The banana leaf must be brought from India?

Mr. M'DOWALL: I believe so.

Colonel BAGNOLD: I have been in India, and I know that the banana leaf is a very watery plant.

Mr. M'DOWALL: It is a patent, and that is what it is said to be; but my own belief is, that it is composed of various articles.

Mr. HODGES: And what did you say about price?

Mr. M'DOWALL: I say that it can give the supply at the present price; but, taking into consideration that it is four times the illuminating power of the coal gas, it is of course much cheaper.

Mr. PLOWDEN, M.P.: Do you say that the oil is stated to be produced from the banana plant of the West Indies?

Mr. M'DOWALL: Yes; it is stated so.

Mr. PLOWDEN, M.P.: Then, do you not think we could obtain gas from any other vegetable?

Mr. M'DOWALL: Yes, I think it is possible. My own opinion is that gas is at present in its infancy.

Mr. NICHOLAY: Are we to burn the oil the same as we would in an ordinary lamp?

Mr. M'DOWALL: No; as I understand it, the application of heat decomposes the oil, and produces the gas.

Mr. CLEMENT GEORGE: Do you not think, if we were to agree to this experiment, we should run great danger of having our courthouse blown up?

Mr. M'DOWALL: Not in the least. We can have a small place in Marylebone-lane for the works, and bring a small pipe into the courthouse.

Mr. NICHOLAY: I think even then we should run a great risk of being blown up?

Mr. M'DOWALL: There is not one-fourth the degree of danger that there is with the common gas.

The CHAIRMAN: Well, gentlemen, you have heard this request, what is your pleasure concerning it?

Mr. HODGES: I move, sir, that it be referred to the committee appointed on the gas question.

Mr. CLEMENT GEORGE: I have no objection to second the motion; but I will just say, from the remarks we have heard drop from Mr. M'Dowall, it is quite clear that this vestry ought to be sure of their

* We understand the material is resin oil, obtained in the manufacture of camphine, and that its yield of gas is about 120 feet per gallon. The cost of manufacture at the Harrow station was upwards of 20s. per 1000 feet.

bonâ fides before we consent to deal with any projected gas companies. Let us look at the position in which the gas consumers now stand with regard to the Marylebone Gas Consumers' Company; and also let us look in the position in which we might have been placed had that company gone on a little further, and we had allowed them to break the ground and lay down a few yards of main—why, we should have involved the parish at once in an extra expense of £3500 per annum. (Hear, hear.)

The resolution was then put, and carried.

THE USE OF GAS AS FUEL.

As you are interested in the efforts now making to introduce gaseous bodies having an affinity for oxygen, as substitutes for common fuel, may I trouble you with a few facts acquired during my experience of the last three years?

1. I do not claim any credit for scientific profundity; my invention is merely a "happy thought," which may be improved, and subserve many useful purposes. When first the idea occurred to me of converting the gas-burner into an artificial cinder, or reservoir of heat, I tried a great variety of materials—iron, brass, copper, platinum, and clay—mixed with metallic oxides, or pounded porcelain and glass, or plaster of Paris, and other substances, in different proportions. The majority of these bodies were rejected, for sufficient reasons, after a long series of experiments, and the exact mixture of argillaceous materials which is described in my specifications was adopted.

Your suggestion of employing the enamelled iron, as a material for the "tongues of fire," occurred also to Mr. Baily; but it was found impracticable to preserve free the holes for the transmission of the gas.

In taking out the patent, I could have secured the exclusive right of making the artificial embers, or "hoods," of any material; but, under the advice of Professor Cowper and my patent agent, I merely guarded the argillaceous material. Had I taken a wider protection, it would have saved Messrs. Bachhoffner and Defries, and a few others, some expense and disappointment in the vain attempt to produce equal effects with the rejected substances.

More than two years' experience of the "hoods" at very high temperature has shown their perfect indestructibility. So well known is this property, that a gentleman in the Potteries, not aware that I had used these "burners" both for lighting and heating, has incurred the expense of a patent for making "argands," "fish-tail," and other known forms of gas-burners, of this identical material.

Each of the burners at present used is a small cylinder, of which the surface measures five square inches; it is perforated at equal distances with 90 holes, each the fiftieth part of an inch in diameter. By this arrangement, the flame, or "incandescent cone," is literally stretched out like an elastic body, and consequently the points of contact between the air and the gaseous fuel are multiplied, and the blue flame, affording evidence of perfect combustion and intense heat, is produced. If, however, the superficial burning surface were simply a horizontal plane, the supply of air would be insufficient to maintain so vivid a fire.

2. The fuel which I have commonly employed, and that only which can be practically relied upon, is the common carburetted hydrogen, or coal gas; but, if the apertures in the "hoods" be made smaller, hydrogen gas may be burnt, and made to produce a brilliant semblance of a coal fire. Price is, however, here an insurmountable obstacle, as this fluid cannot be produced at a cost sufficiently cheap to be used generally, even for light.

M. Gillard, late secretary to M. Guizot, has patented an ingenious method of generating hydrogen by the decomposition of steam in its passage over red-hot charcoal; but, notwithstanding the most persevering canvass, and the possession of undoubted merit, he did not succeed in inducing capitalists to take up his scheme. He proposed to supply his gas to the public at the rate of 2s. per 1000 cubic feet; but the quantity required to be consumed in order to make his beautiful cylinder of filligree platinum sufficiently incandescent to give light, made it much more expensive than the common coal gas. The light was most beautiful, and almost as pure as that of the sun; but this merit could not prevail against its defective economy.

Dr. Dalton compiled a valuable table of the comparative heat-generating properties of fuels, estimated by weight. The relative power of hydrogen is represented by the figures 24,000, and that of coal gas by 6300; but, as the specific gravity of the latter is 10 times as great as that of the former, it would require nearly three volumes of hydrogen to produce the same effect as the volume of coal gas.

I have been greatly interested in the application of hydrogen as fuel. This result can only be produced by the use of argillaceous burners as solid intermedia. Could the decomposition of water, by the use of zinc and sulphuric acid, be made a step in the process of manufacturing zinc paint, hydrogen could be supplied to the public at a moderate rate; and I have faith that this great boon will be secured before long, though certainly not by means of the Polytechnic process.

3. As gas of whatever kind must always be, when compared with coals, an expensive fuel, the idea of heating apartments by simple radiation from surfaces heated with gas, and arranged like our present open grates, is a perfect delusion. By such arrangements 90 per cent. of the heat is lost. The desired effect can only be realised by the joint effect of radiation and convexion. The fire must be carefully included in proper media, and every ray of caloric appropriated as far as possible by introducing currents of pure air in contact with the heated sides of the stoves.

To procure a substance fitted to secure all the effects desired by the use of these vessels has proved a real labour. No known substance had the property of resisting the necessary variability of temperature without contaminating the purity of the air. This desideratum has, however, been found in an argillaceous mixture, which will bear to be heated to redness, and against which currents of air impinging in great quantity, but only for a moment, become warmed to bloodheat, and afterwards circulate in apartments without losing any of their virgin qualities. In fact, Mr. Copeland's beautiful porcelain stoves are now in successful operation in bedrooms and other apartments having proper flues.

4. The application of the atmopyric stoves in small collateral rooms without flues has been a matter of difficulty, owing to the disinclination of the products of combustion to ascend in cold metallic tubes; but Mr. Henry Baily, by a philosophic contrivance, has succeeded in securing the escape of the vapour under all circumstances.

5. The main advantage belonging to the atmopyric principle is the solid medium it affords for the accumulation of heat; the sides of the "hoods" being made of any thickness, and heaps of fictile fragments placed in juxtaposition. Hence a mass of solid fire is produced, which possesses a sharpness indispensable in many culinary operations; and that may be made to cumulate to an intensity sufficient to smelt the precious metals.

This is an effect which it is obvious thin leaves of platinum can never produce.

6. The atmopyre is now applied to the generation of steam; a foot of gas will evaporate a pound of water. Consequently, 60 feet of gas consumed will equal a horse power. The expense is absolutely greater than that of coal; but when the collateral saving of labour is considered, the great levity of the gas, and its elasticity, which enables it to be compressed into one-fortieth part of its bulk, its eligibility for small stationary engines, for locomotives, and small low-pressure boats, is not "the mere baseless fabric of a vision."

7. Although a long time must elapse before our coal fires can be superseded as the general source of heat in our sitting-rooms, I do not doubt that for occasional fires in bedrooms, libraries, offices, &c., gas will come into immediate use.—(*Builder.*) D. O. Edwards.

A Clear Case for Mr. Thwaites.—Winchester, April 17.—The gas lights on Monday night were troubled with St. Vitus's dance, both public and private lamps occasionally sinking so low as to cause apprehensions of a sudden extinguishment, which was followed at intervals by increased brilliancy. The alternate changing from lightness to darkness caused great inconvenience, and was attributable, we should presume, to some mismanagement in the means of supply. The quality of the gas supplied to the public is not objected to, but complaints are continually made of a deficiency. We have frequently seen many of the public lamps extinguished at a very early hour in the evening.—*Hampshire Advertiser.*

New Gas Cooking Stove.—Mr. Bower, St. Neots, Hunts, has lately registered a gas cooking stove, which has two cases of thin metal, with a non-conducting medium between. The size we now describe is called No. 3, costing £6. 10s., and is 2 feet 6 inches wide, 2 feet 10 inches high, and 2 feet deep. It has two compartments, at the bottom of which are two iron pipes, into which are screwed a number of nipples, having minute perforations, and arranged at certain distances (depending upon the size of the stove). These, when lighted, give a very thin jet of gas, with only a feeble blue light, but considerable heat. In the one compartment, a couple of fowls may be roasted; and in the other, a very large piece of beef and eight or ten pies. The top has projecting studs, much higher than those in general use, and it is so arranged that five large saucepans or boilers may be placed on it at once. The inventor states that the consumption of gas only averages 35 feet per day.

A Treat for the Civic Aristocracy. — Mansion-house-street promises to be a flourishing rival to Charing-cross, in the occupation it affords to the competing gas companies in researches after leaks. For years past one can seldom pass the latter locality in daylight at any season of the year, without observing half a dozen men at work pecking up the paving stones, and sniffing each shovelful of earth, for some trace of the erratic truant. The enormous traffic concentrated in front of the Mansion-house has similarly afflicted the mains of the three City gas companies, and permitted some of their odoriferous contents to penetrate the apartments of his civic majesty's palace. Nearly every line of gas pipes passing through Mansion-house-street has, consequently, undergone a critical examination during the past month, and a few trifling leaks have been discovered; but the nuisance remains unabated; and it would, therefore, appear that the mischief had its origin at some distance from the point where it declares itself.

Brighton.—The gas companies of this town have given notice of their intention to reduce the price of gas to 5*s.* per 1000 feet, on and after the 29th of September next; and the railway company have entered into a four years' contract with an individual for the lighting of their extensive station and workshops at 4*s.* 6*d.* per 1000 feet.

Cement for the Joints of Clay Retorts.—For jointing the mouthpieces, take 20 lb. of gypsum (sulphate of lime), and make it into a pulp with water; add to it 10 lb. of iron borings, saturated with a strong solution of sal-ammoniac (muriate of ammonia). Mix the whole well together till it is of a consistency fit for use. For the joints between the separate lengths of clay retorts the proportions must be varied to 10 lb. of gypsum and 20 lb. of iron borings, treated in the same manner. This cement is used in the works of the Imperial Continental Gas Company, where several hundred clay retorts are employed in the manufacture of gas.

Goddard's Asbestos Gas Fire.—We had an opportunity a few days since of inspecting this very elegant application of gas to the production of a cheerful fire in an open grate. It is simple, portable, and economical, both in first cost and in its consumption of gas—seven feet per hour being sufficient for the warming of a moderate-sized apartment. Nickel, or any other metal not rapidly oxidised, and moderate in its first cost, might be substituted for platina in the production of a "gas fire."